

REPORT

ON

PILGRIMAGE TO JUGGERNAUTH,

IN

1868.

WITH A NARRATIVE OF A TOUR THROUGH ORISSA;

A SANITARY SURVEY OF POOREE; AND NOTES ON CHOLERA; INLAND QUARANTINE; A PILGRIM
SANITARY TAX; A POOREE LODGING-HOUSE BILL;

&c., &c.



BY

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— c. 2 —

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PREFATORY NOTE.

The following Report having, almost unavoidably, reached a much greater length than was originally intended, I have thought it right to throw it into the form of *six* separate parts, the subjects discussed in each of which are as follows :—

PART I.—*Sanitary Survey of Pooree ; with Suggestions regarding its Sanitary Requirements.*

PART II.—*Narrative of a Visit to the Temples of Juggernaut, Bhobanessur, and Jajipore ; and of a Tour through the Province of Orissa.*

PART III.—*Regarding a Pooree Lodging-house Bill.*

PART IV.—*Remarks on the manner in which Pilgrims are treated by Priests and Pundahs. Remarks as to the impossibility of prohibiting Indian Pilgrimages. Remarks as to the advisability of levying a Pilgrim Sanitary Tax.*

PART V.—*Regarding Cholera and Inland Quarantine, in their relations to Pilgrimage.*

PART VI.—*Concluding Remarks ; embodying Suggestions as to the best mode of providing, financially, for the regulation of Pilgrimage through Orissa.*

Thus I have, in the first place, described what I saw at Pooree and throughout the province generally.

Again, I have endeavoured to give an idea of what has, at different times, been written on the subjects of “disease” and “want of sanitation” in Orissa.

Lastly, I have presumed to indicate what steps should be taken to remedy the evils described ; and what financial arrangements can alone, in my opinion, prove sufficient to meet such exceptionally pressing requirements.

As far as possible, details have been classified by the aid of a careful index of separate paragraphs ; so that any section of the Report can be easily found, and any other as easily passed over.

The Hindoo devotee visiting Orissa considers that his pilgrimage is not complete until he has been successively to Juggernaut, Bhobanessur, and Jajipore. I visited these three famous shrines ; and the following notes are the result of observations made either actually at those places of pilgrimage, or on the way to and from them.

The widespread (yet to a great degree removable) insanitary conditions of Orissa present a strong claim on the Government of this country.

What have been called the "wants and woes" of Orissa are grave beyond all description. They are no mere passing evils. On the contrary, they must continue unremedied until large sums of money are systematically devoted to their removal. It remains with the Government to determine how this can best be accomplished.

Many collateral subjects hinge upon that of "Pilgrimage to Juggernaut," and I have thought it advisable not to pass these over. It may, indeed, fairly be said that fully to understand all the sanitary bearings of pilgrimage, we must, of necessity, study not only medical topography, meteorology, geology, and the natural productions of a country, but also the social and moral condition of a people, their every-day habits, their rural customs, their modes of thought, the observances of their religious rites and worship, their great gatherings, their public festivals, and the general results to which all these lead.

The pilgrimage to Púrí-Juggernaut being one which powerfully influences the welfare of many millions of souls, I have thought it advisable to regard it from a broad point of view; and it is only in the undoubted importance of such a consideration that I can plead an excuse for the otherwise unpardonable length of this Report.

D. B. S.

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PART I.

SANITARY SURVEY OF POOREE.

PART I.

SANITARY SURVEY OF POOREE, WITH SUGGESTIONS REGARD- ING ITS SANITARY REQUIREMENTS.

The Town of Pooree has no Municipality. The present Magistrate, Mr. Raban, takes much interest in the health and conservancy of the place. In the past, however, little or nothing has been done to keep the city clean, and no funds, to speak of, are now available for the purpose. The conservancy establishment is merely a nominal one, and quite unequal to the requirements of the place; a very few conservancy carts are used where a large number are urgently required. There are no public latrines or urinals, and no trenches. The dry-earth system is urged on the people by the authorities; it is occasionally adopted, but on anything like a large scale it is not employed. The consequence is, that certain localities are greatly defiled, and the resulting stench is most offensive and sickening. The so-called drainage of the place is in a lamentable state, and it appeared to me that there was no drainage leading away from the city, but, on the contrary, all towards its centre,—the site of the city being apparently lower than most of the surrounding localities.

The following are the levels of various localities adjacent to the town of Pooree, as laid down by the Superintending Engineer, Cuttack Circle :—

	Reduced to Mean Sea Level.
On plinth of Pooree, P. W. D. bungalow	23·35
Dâk bungalow	19·06
Road intersecting European town of Pooree, from P. W. D. bungalow to Flag-staff	20·87
Mungla Ghât, about 1 mile west of Pooree	8·70
Level of paddy-fields west of Pooree	7·87
Mean level of native part of town	26·35
Border of Summing Jheel, west of Pooree	17·71
Sur Lake, 7 miles N.E. of Pooree	10·22
Ordinary flood height, during rainy season, of Chilka Lake ..	3·00
Height of flood in 1866	9·04
Bulwunta, 12 miles from Cuttack	61·11
Balcotti or Surdaipore	50·52
Town of Piplee	36·36

The houses are very faulty, in a sanitary point of view. As a rule, each house is considerably raised on a masonry plinth from three to six or eight feet in height. Through this plinth runs a small circular masonry gutter, which communicates with the rooms in the interior of the house, and through the gutter passes fluid refuse and urine from the interior. Nothing can be more objectionable than this, and yet the system obtains in the case of every house in Pooree.

Noxious ooze is continually trickling from the opening in every plinth, down its front, to a sink or cesspit below. A more dirty or inefficient plan of sewerage, or drainage, or whatever it be called, could not be imagined. Sometimes even within the plinth itself a dark, deep, open cesspool exists,—a receptacle of indescribable abominations; and yet there are thousands of these in Pooree for ever evolving deleterious gases. In the front of each house is a small verandah, immediately below the floor of which is the gutter already described, the effluvia from which consequently emanate within two or three feet of those who sit in the verandah,—an ever-present source of danger to health. The interior of each house consists, as a rule, of two or three small rooms, leading one from the other, leaped with mud, and without any windows or roof ventilation. In these rooms pilgrims are crowded, until not an inch of space is left uncovered. The massing of human beings is something horrible: it exactly reminds one of sheep in a pen. It appeared to me almost wonderful that human beings could exist under such circumstances, the conditions being truly poisonous in character. Each room so-called may be described as a badly lighted den, in which ventilation is not only deficient, but altogether wanting; where the atmosphere is warm, close, stifling, and sickening, and where human beings are crowded together in excess, living in direct contravention of every known law of health. What organic poisons may not be lurking in those loathsome places! What more favorable seed-plot could be devised for the generation of specific disease!

It is related, by Dr. Southwood Smith, of a poor woman in England, who resided in a room in the parish of Marylebone, in which no less than five families were located—one in each of the four corners, and the fifth in the centre of the room—that, being asked by a Sanitary Inspector how they could possibly exist, she replied: “Oh! indeed, your honor, we did very well until the gentleman in the middle took in a lodger.”

The pilgrims at Pooree are so densely crowded in every apartment, that it is simply impossible to admit more inmates; not only the corners and the centre are occupied, but the entire space. Dr. Mouat thus describes one of these terrible places:—

“In the lodging-houses they are crowded to such an extent, that I was shown one apartment, in the best pilgrim hotel of the place, in which eighty persons were said to have passed the night. It was thirteen feet long, ten feet five inches broad, with side walls six feet and a half in height, and a low pent roof over it. It had but one entrance, and no escape for the effete air. It was dark, dirty, and dismal when quite empty, and must have been a pest house during the festival. In this house, in a similar room, occurred the first case of cholera of the last outbreak. If this be the normal state of the best lodging-house in the broad main street of Pooree, it is not difficult to imagine the condition of the worst, in the narrow,

confined, undrained, back-slums of the town—for there are lower depths even in this abode of filth and corruption.”*

Most of the Pandahs have houses of their own for the reception of pilgrims. When these are fully occupied, other places are rented, at high charges, in which pilgrims are crowded almost to suffocation. In apartments containing 50 or 100 people, there is very little light, less pure air, and no ventilation. The following is an extract from the Diary of the District Superintendent of Police at Pooree for the 4th week of June, 1865 :—

“ I should think there are 20,000 Bengalee women here, who are crammed into small lodging-houses which are not under any kind of regulation whatever,—the space allowed being, per head, just as much as they can cover lying down. I shall feel it to be my duty to bring the entire question before the Magistrate, as the prevailing system, and its consequences, would not be tolerated in any semi-civilized country.”

Again, the following is an extract from the Diary of the Deputy Inspector-General of Police, 1st Circle, for the week ending 16th November, 1867 :—

“ The District Superintendent writes :—‘ I went into a house in the town this afternoon ; above 45 pilgrims were putting up, men and women ; the place had only two doors, no windows (one of the doors was locked). This place measured 12 by 20 feet, certainly not more ; and in this place no less than 45 persons were crammed. The stench was overpowering, and the heat like an oven ; no wonder the people are attacked with cholera : and unless some law is passed to prevent these Pandahs overcrowding their houses with pilgrims, not only cholera but other diseases are sure to be generated.’ ”

Mr. Raban, the Magistrate and Collector of Pooree, thus alludes to this subject in his admirable Report to the Commissioner of Cuttack (No. 93T., dated 19th February, 1868) :—“ The poorer up-country pilgrims submit to crowded rooms ; but the Oorlah pilgrims crowd into a room till it would be difficult to introduce another person. I visited one room filled with Oorlahs from Kimeddy, in the Madras Presidency ; the room was so crowded that it was difficult to move, yet several of the people were singing, and one was actually cooking for the rest at a large fire, which filled the room with smoke. This was an extreme case, but I satisfied myself, by visiting a number of houses, that the people are crowded in a manner prejudicial to health, and calling for special legislation. Many of the houses afford very fair accommodation for limited numbers, but are quite unfit for the reception of the numbers that crowd into them. A third class railway carriage, filled with native passengers, gives a very fair idea of the extent of the crowding ; and it must be recollected that these

* To this passage the following foot-note is attached :—

“ This statement seemed to be so incredible, that the matter was subjected to direct experiments in the Alipore Jail, where it was found that ninety natives of average size could squat in a cell ten feet square, and one hundred and twenty could stand in the same space.”

people sleep in these crowded rooms, which are no better provided with ventilation than the ordinary kind of houses in this country." In another part of the same Report, Mr. Raban informs us that he, on one occasion, entered a room where a woman was lying ill with cholera, whilst others close by her were cutting up vegetables.

Giving heed to these observations of eye-witnesses, and remembering that a single individual breathes 16·66 cubic feet of air in an hour, and that in that time he should be supplied with a fresh supply equal to nearly 2,000 cubic feet, we are in a position to estimate the dreadfully abnormal condition of the interiors of Pooree lodging-houses.

The best lodging-house that I saw in Pooree was that of Bulbudra Gooroo, or, as he is commonly called, Bulya Gooroo. It is well built, and by no means on a bad plan, although even here, at times, a Health Officer could find fair grounds for remonstrance. The owner of the house alluded to is a wealthy man; yet he displays, in various ways, a marked interest in the comfort and well-being of the pilgrims who come to his establishment. I told the Gooroo that I would report these facts to the Government, and he seemed pleased.

To each house there is a back-garden. Close to the dwelling the ground is a little cleared, but beyond it is overgrown with dense underwood, in which offal and filth of every sort has accumulated from time immemorial. These so-called gardens are truly receptacles of every kind of defilement. In one corner, as a rule, may be seen a heap of sweepings and rubbish, surmounted with broken earthen pots; further on, the ground is generally wet and slippery, and then at once we come upon every conceivable nuisance:—decomposing animal and vegetable matter, piles of decaying rubbish, accumulations of ordure, tangled jungle of *Asclepias gigantea* and *Jatropha curcas*, and here, there, and everywhere the odor *stercoreus* which, ere long, drives one back disgusted and sick. There is no exaggeration in this picture of a Pooree garden. I carefully visited every part of the town; everywhere I discovered a similar state of things. The largest street of Pooree is broad and spacious. During times of festivals thousands of pilgrims are always there. The smaller streets are less clean, almost in proportion to their narrowness. Passing along them, one not unusually hears the sound of the native drum, the accompaniment of a small funeral procession, which at quick-pace glides along, the mourners bearing the corpse, and, in their poverty, scattering rice instead of money on the ground. Some of the lanes and alleys are confined and very filthy. Everywhere one comes upon the so-called back-gardens already described. The soil of the streets is for the most part sandy and dry, except where the levels are unusually low and the drainage defective. Under these circumstances, water remains stagnant and the streets are impassable, except to those who are prepared to wade through mud and water to the depth of several inches. There are many tanks in different parts of the city. They are almost all regarded as very sacred: indeed, all the ground in and around Pooree is considered holy. Many of the tanks are in a very filthy condition, being stagnant reservoirs loaded with con-fervoid growths, and evolving noxious gases. They are generally at very low levels, and densely surrounded either by houses or tangled jungle. On the 2nd July I examined the water from the Saith Gunga Talao; I had no materials with me for anything like minute analysis, but I found that it evolved a strong odour of sulphuretted hydrogen, and became of a deep chocolate colour on the addition of a solution of lead. I believe most of the tanks to be in the same

condition as that now indicated, and I have no doubt that, by pereolation, the water of almost all the wells in the city is very seriously contaminated. The wells themselves are, in many instances, of poor construction and in a dilapidated state. The natives do not drink water from all the tanks, but the wells closely adjoining them are freely used. I made enquiries as to the number of houses in Pooree, and received the following Return :—

<i>Divisions of the Town.</i>					<i>No. of Houses.</i>
Balee Sahee	...	...	...	...	1,099
Kaleeka Dabee Sahee	...	...	...	...	448
Matee Mardeep Sahee	...	...	...	...	291
Dole Mondee Sahee	...	...	...	...	563
Gourbar Sahee	...	...	...	...	289
Hurchund Sahee	...	...	...	...	984
Barsle Sahee	...	...	...	...	594
Chodung Sahee	...	...	...	...	217
Dande Mal Sahee	...	...	...	...	393
Dytapara Sahee	...	...	...	...	231
Markund Sahee	...	...	...	...	1,254
					6,363

Thus, there are supposed to be 6,363 houses in the town. Into these are packed the 25,000 or 30,000 residents of Pooree, and all the pilgrim-lodgers in the place. The overcrowding, therefore, is very great. Stirling, writing in 1825, states that there were 5,741 houses in Pooree, and that the town owes its size and importance entirely to its connection with the temple. His narrative continues thus :—“The principal street is composed almost entirely of the religious establishments called *Mat’hs*, built of masonry, having low pillared verandahs in front, and plantations of trees interspersed. Being very wide, and the temple rising majestically at the southern end, it presents by no means an unpicturesque appearance ; but the filth and stench, the swarms of religious mendicants, and the nauseous objects which offend one’s senses in every part of the town, dispel any illusion which the scene might otherwise possess.” As may be imagined, forty-three years of sanitary non-feasance has not improved the condition of things since Stirling wrote. On the contrary, the filth and stench has accumulated ever since, so much so as summarily to dispel not only the illusion, but also the spectator from the scene. This, however, more particularly applies to the smaller streets and byways. The *Mat’hs* or *Muths*, as they are called, are for the most part large, and not unfrequently well-built, solid edifices ; they are religious houses or monasteries, in many cases richly endowed, and regulated by persons called *Mohunts*, who are abbots, and trustees of the *Muth* endowments.* Sometimes the expression

* In certain parts of India—for example, in the Tipperah District—*Mut’hs* are tombs or mausoleums, constructed by the Hindoo population for the reception of the dead ;—an ancient custom, dating anterior to cremation, and probably taken from aboriginal races. I find the following allusion to these structures in the “General Report of the Tipperah District,” by J. F. Browne, Esq., C.S., of the Middle Temple, Barrister-at-law, Superintendent of Survey, Second Division,—Calcutta, 1866 :—

“The Mahomedans bury their dead, and, when they are rich enough, erect over them simple gravestones. Hindoos, of course, burn all corpses, and in the present day erect no tombs. But it was not so in former times. The eastern portion of this District abounds in spire-like brick monuments, called *Muts*. I have been informed that they are the mausoleums of rich Hindoos, and that it is only since the beginning of this century that the custom of building such memorials has ceased.”

Muthdar is employed, which is a generic term, including Mohunts and those subordinate to them. The Mohunts are sometimes priests, but not necessarily so. The Pandahs, again, are those who send out, over all parts of India, emissaries known by the name of "pilgrim-touters," to collect and induce pilgrims to come to Juggernaut. They receive them on their arrival in their lodging-houses, and act as their guides in the town and temple during their stay there. But all the temple arrangements are carried out by a large special establishment. Most of the Pandahs receive pilgrim-lodgers, but it is not only they who do so; on one scale or another, almost every resident of Pooree is a lodging-house keeper. In certain well-frequented parts of the town I observed broken ground and hollows, which were indiscriminately used for natural offices. This highly objectionable practice so polluted the atmosphere around, particularly beyond the Chundun tank, as to render it almost impossible to pass along a road that adjoins the spot; even the natives pass by, at utmost speed, holding their noses. All this requires to be put a stop to with a firm hand. Some of the tanks are magnificent public works. I was particularly struck with those called the Chundun and the Indradumminee. The latter is at the northern end of the town; the former is centrical. Both of them are very large. If the natives could be induced to set aside two or three of the city tanks for drinking purposes alone, a great sanitary point would be gained. But I am told they will not do this. I am of opinion that the Government would be justified in laying down certain stringent regulations under this head. So long as many thousands of pilgrims daily bathe and drink in the Chundun and other tanks, so long is a system connived at which many of the best sanitary authorities of the day believe to be directly productive of cholera and other specific diseases. I would let the people have their choice of sites for drinking purposes; but at those tanks, once selected, I would for ever prohibit bathing, washing of clothes, and wallowing of cattle. I know that at Pooree this is a matter involving considerable difficulties; yet I cannot think they are altogether insuperable. Many of the wells adjoining dirty tanks ought to be scrutinized, and either thoroughly cleaned out or, better still, closed. I say this because I believe them (as I remarked before) to be seriously polluted, by percolation. A good analyst should be deputed minutely to examine the waters of Pooree, and of the wells by the wayside in different parts of Orissa; chiefly those by the main road, along which pass continuous streams of pilgrims from Midnapore *viâ* Balasore, Bhudruck, Cuttack, and Piplee to Pooree. To the eastward, and to a great degree on the north and south, the town of Pooree is bounded by the sands. Here the people resort for the calls of nature; but there are no latrines or trenches, and no system exists, on a large scale, if at all, for the utilization of the filth. It is simply left to the action of the elements, and the result, as might be expected, is most noxious. To the westward the city is bounded by swampy, inundated tracts of country. At the southern extremity of the town, on the sands, is a secluded locality known by the name of "*Surga-Dwar*," or "gate of heaven,"—Swerga being the paradise of Indra, the god of the elements. It is here that the bodies of pilgrims and others are burnt in great number; it is a weird spot, but to the Hindoo, as might be inferred from its title, it is pre-eminently sacred. On all sides are banks and mounds of sand, almost embedded in which are strange old Hindoo monasteries. The ashes and charred remains of many a corpse are there, marking the lonely sands.

The cremation of the bodies taken there is not sufficiently attended to. The corpses are, in many instances, but imperfectly consumed; the result is a spectacle frightful to behold.

In no single case, however, can this last long, as jackals, vultures, and other beasts of prey soon come, and leave but whitened skulls and crumbling bones. Places such as this are usually termed "Golgothas" by the European residents in Orissa. There are several of them around Pooree. During one of my evening walks with Mr. Raban, towards the northern part of the sands, we came upon a spot marking the former site of several sheds erected for the reception of those who were famine-stricken in 1866. Close to this was a "Golgotha" indeed: within a radius of 20 feet I counted 60 skulls, and a little further on, in a radius of 4 feet, 24 skulls. A native told me that hundreds of skeletons were there deposited beneath the confused heap of bones lying on the surface. The sight presented a terrible memorial of the reign of famine and death—a spectacle from which the mind recoiled in sadness. The so-called sands are very peculiar. From the surf-beach to the outer (*i.e.*, the eastern) limit of the town is one vast field of sand, not of continuous level, but very irregular, presenting at certain parts high mounds and correspondingly deep hollows. This is doubtless the result of violent storm-winds blowing inland. The old Hindoo legends assert that the site of the present town of Pooree was, in former ages, under the sea. On the beach are found all the public offices, and the houses of the European residents, fully exposed to every breeze that blows across the Bay of Bengal. Beyond the last of them, in a northerly direction, is the European cemetery, a small enclosure all by itself on the lonely beach, with no tree or shrub or grass anywhere near it. On every side of it there is nothing but sand, and the sea-spray from the adjoining surf, in stormy weather, is driven by the wind against the graveyard monuments, the inscriptions of which have in many cases thus become faint and almost illegible tracings. Indeed, I could not succeed in reading some of the inscriptions, so ruthless had been the action of the spray on the grey chlorite-slate, of which the tablets are for the most part constructed; the chisellings of the sculptor had been worn and eaten into by time and the elements. This is a very bleak and sad spot. Laurie alludes to it as "a small magazine of mortality, not unworthy of a visit." Mr. Raban thus alludes to the environs of the town:—"The topography of Pooree is peculiar in several respects. The town is built on a sandy plain, immediately adjoining a large tract of rich alluvial soil, subject to flood, and covered with rank vegetation; this bounds the town on the north, being separated from it by an outlet from the river Bhargovi. About a mile from Pooree, on this side, is what is known as the Summing Jheel, a large shallow lake, on the edges of which rice is grown as the waters recede; on the other three sides Pooree adjoins the sands, the greater portion of the town lying lower than the adjacent sand-hills. This renders drainage very difficult, except at very great expense. (*Vide* Report No. 93T, dated 19th February, 1868.)

I have now, in a manner, described the different parts of Pooree, and their peculiarities. From the above notes it will be inferred that I consider the city a very filthy one indeed. It is almost difficult to say what is here most required, in a sanitary point of view. Indeed, it is scarcely too much to assert that *everything* is required *very urgently*. The causes of insalubrity are many, and they prevail widely. (Throughout the whole place there is a sickening odour of human beings massed together: everywhere, except perhaps in the *Burra Dund* (and even *there*, there is not much to boast of), the great want is fresh air. The houses are horribly overcrowded. The interiors reek with nauseous human exhalations. There is no systematic conservancy, no drainage, no cleanliness.

So far as I could observe, there is not such a thing as a pavement in Pooree. The sources of water-supply have been polluted from time immemorial. For centuries every variety of nuisance has been committed throughout the precincts of the place, and it is now, in many parts, loathsome from the concentrated and persistent odour of fæcal matter in a state of decomposition. The cloacal abominations discoverable in the gardens, intensified by heat and moisture, are almost unapproachable. The gutters are equally offensive. On all sides the air is foul to suffocation, with emanations from garbage and putrescent *débris*. There is a universal dearth of oxygen. Carbonic acid, ammonia, carburetted and sulphuretted hydrogen abound to a poisonous degree. Words fail me as I endeavour to depict the whole truth.

It is here that for ages millions of poor, broken-down, spæmic creatures have congregated for religious purposes, in the midst of numberless devitalizing agencies.) Here, at many different times, they have died by thousands; here famine, cholera, and dysentery have, ever and anon, held their sway; here many thousands of pilgrims are still fated to meet together after periodically recurring intervals of time; here thousands will die, in the future, from the influence of those local causes of specific disease which are so painfully apparent to the sanitarian; here, at many seasons of the year, is an unusual amount of sickness and misery, and consequent demoralization, from causes which are certainly, to a great degree, capable of removal by the expenditure of money; here, broadcast, are countless permanent influences productive of physical and moral contamination and degradation; here are localized perennial sources of human wretchedness, in constant and powerful operation; here, during outbreaks of epidemic disease, are all the conditions which facilitate their rapid spread, favor their activity, and aggravate their fatality; here pestilence finds a congenial resting-place, vice a hotbed, and death a home; here, the longer the evils I have painted exist, the greater and more imminent will be the danger to public health and safety.

It has been calculated by Professor Max Pettenkofer, of Munich, that *the excrement of 100,000 inhabitants of a town annually impregnates the soil with a mass of putrescible matter equal to that which would result from the decomposition of 50,000 corpses buried every year in the same place—i.e., around the houses.* (*Vide Proceedings of the International Sanitary Conference, 1866, p. 29.*)

If there really be an approximation to truth in such a statement as this, the pollution existing around the temple of Juggernaut must be even much worse than I have described it.

The study of Pooree and the pilgrims there comprises a vast subject; one not affecting Pooree alone, or even Orissa, but, indirectly, every part of India. I hope the Government will regard it from this broad point of view, and deal with it accordingly. • It was said by Lord Palmerston (when he was petitioned by the people of England to procure a Royal Order for a national fast, in anticipation of an approaching visitation of cholera): "The best course which the people of this country can pursue to deserve that the further progress of cholera should be stayed, will be to employ the interval that will elapse between the present time and the beginning of next spring in planning and executing measures by which those portions of their towns and cities which are inhabited by the poorest classes, and which, from the nature of things, must most need

purification and improvement, may be freed from those causes and sources of contagion, which, if allowed to remain, will probably breed pestilence and be fruitful in death, in spite of all the prayers of a united but inactive people."

Such is precisely the advice which I would offer to the Government and to the people of Pooree with regard to the condition of that city. It must be thoroughly cleansed. Scavenging must be systematic and long continued; nuisances must be prohibited; sanitary police must be organized; overcrowding must be prevented; the potable waters of the place must be analyzed, and conserved by stringent administrative regulations; local drainage must be rendered efficient; and sanitary engineering must be called in to the aid of chemistry, hygiene, and medicine. In every sanitary respect a discriminating but firm authority must be exercised. Failing all this, Pooree must still continue, from one generation to another, to be the ever-open grave of countless throngs of pilgrims. But it need not be so. A learned member of the medical profession, and a distinguished hygienist, thus wrote some years back: "The character of pestilence which gave it its great power and terror—that it walketh in darkness—is its character no longer. Its veil has fallen, and with it its strength. A clear and steady light now marks its course from its commencement to its end; and that light places in equally broad and strong relief its antagonist and conqueror—*Cleanliness*." The same author repeats the idea, in another part of his work, thus: "Overcrowding, for example, we can prevent; the accumulation of filth in towns and houses we can prevent; the supply of light, air, and water, together with the several other appliances included in the all-comprehensive word 'cleanliness,' we can secure. To the extent to which it is in our power to do this, it is in our power to prevent epidemics." I do not say that I strictly concur in such an opinion as the last, yet the words contain much truth. I shall now proceed to a consideration of the exact measures which might advantageously be carried out at Pooree, and on pilgrim routes generally.

Dr. Mouat has written three or four careful minutes on subjects connected, directly or indirectly, with the pilgrimage to Pooree. He is personally familiar with the place, and he has devoted much attention to its sanitary defects and requirements. His memorandum No. 460 of 1868, headed "Cholera among Pilgrims at Juggernaut," is a valuable and suggestive paper. The recommendations which it contains regarding the general subject of pilgrimage are practical and comprehensive. I think I cannot do better than consider Dr. Mouat's suggestions, that the Government may perceive how fully I concur in the advisability and urgency of many of them. On some questions of minor importance Dr. Mouat and I differ. With regard to the leading points, I think I may say we are not at all at variance.

SUGGESTIONS REGARDING THE SANITARY REQUIREMENTS OF POOREE.

Dr. Mouat makes the following recommendation:—

"To carry the sanitary and other measures above proposed into effect will require a special agent—the very best who can be selected. The Civil-
Appointment of a Health Officer at Pooree. Surgeoncy of Pooree should, therefore, again be given to a European Officer, and the appointment should be placed on the footing of a first class station,

to render it worth his acceptance, as there is no private practice or other emolument of any kind for a Medical Officer at Pooree. He should be *ex officio* Protector, or Sanitary Inspector of Pilgrims, and should be armed with full powers to enforce the regulations that may be framed. He should devote himself thoroughly to the study of cholera in all its relations, at its source."

Remarks.—I consider that it is very necessary, indeed, that a special Health Officer should be appointed at Pooree. He should be carefully selected, and his pay should be liberal, in consideration of the fact of his duties being of a very onerous and responsible nature. It seems to me open to question whether he should be "armed with full powers" himself. I am inclined to think it would be almost better if the ultimate "enforcing of all regulations" lay with the Magistrate.

The proposal to appoint a Health Officer at Pooree originated with Mr. Strachey. (*Vide* letter No. 312, dated 29th May, 1867, to the Secretary to the Government of India, Military Department.)

The original scheme suggested, besides the appointment of a Health Officer, the establishment of a Sanitary Committee at Pooree, under the presidency of the Magistrate. There are, however, it may be safely said, no materials for a good Sanitary Committee there. Regarding the Sanitary Officer, Mr. Raban writes as follows:—"I think the appointment as Health Officer of a medical man, with considerable experience of sanitary measures, and accustomed to work well with the people, would greatly simplify our difficulties. The subject with which we have to deal is so mixed up with difficult medical and social questions that, excepting a few obvious measures, our proceedings will at first be little more than tentative, and will produce comparatively slight effects. Such an Officer as I have described would be able to feel his way, to collect valuable observations and statistics, and to suggest new measures of reform. I fear that if too much be attempted at first, or before the facts have been properly ascertained and digested, more suffering may be caused than at present results from non-interference."

The Health Officer's duty would be to introduce an effective organization for carrying out all sanitary requirements on a definite plan. He would direct the necessary arrangements, and see that they were adopted and carried into effect. He would advise the Magistrate on all special matters of conservancy. He would institute a scheme for careful and correct registration of all deaths; and he would lay the basis for the regular record of general statistics connected with the place. Under this head might possibly fall the enumeration of the pilgrims to and from Juggernaut.

He would be a general Medical Inspector of houses and their surroundings, of food-supplies, of hospitals, dispensaries, and systems of medical relief. He would study and report upon all the moot questions connected with the nature, causes, and laws of cholera and other fatal diseases. He would make careful observations on temperature, rainfall, barometric pressure, humidity of the atmosphere, direction of wind, condition of soil, height of water in wells, &c., closely watching the relation of all these to the appearance and disappearance of cholera. He would pay particular attention to the disposal of the night-soil of the place,

the condition of surface drainage, the conservancy of drinking water, the prevention of nuisances, and all other matters directly or indirectly affecting public health. Lastly, it would be a very important part of his duty to be continually amongst the people, to make himself popular amongst them, and to try to act on their good-will, in order, as far as possible, to persuade, rather than compel, them to practise domestic and general cleanliness, and to live generally in accordance with the laws of public health.

Dr. Mouat next makes the following suggestions :—

“The Sub-Assistant Surgeon of Pooree should be retained, and he should also be the best man of his class, and a Hindoo of such caste as to authorize his admission to every temple, muth, and other place to which a Christian cannot find admission. He should also be armed with large powers, to compel attention to regulations where no European can enforce them.”

Remarks.—I quite concur that the Sub-Assistant Surgeon should be retained to carry on the duties of the Pilgrim Hospital, and to act as an assistant to the Health Officer. As Dr. Mouat observes, he should be a man of high caste, so as to have easy *entrée* into all religious establishments. But, in my opinion, he should have no magisterial powers; all judicious measures proposed by him should be submitted to the Health Officer, and enforced by the Magistrate of the city.

Dr. Mouat suggests that “the occurrence of the first case of cholera in any lodging-house should cause its immediate evacuation. It would not be right, or humane, to deprive these poor creatures of shelter at a time of sickness, and yet it would not be safe to re-occupy such lodging-houses until they are reported to be fit again for human occupation. This would never be during the time of that particular festival.”

Remarks.—This is a necessary step, not merely to counteract the possible transmission of cholera, but because every infected house is in itself a distinct focus and seed-plot of the disease. Houses of refuge ought to be instituted for the reception of those who are thus turned out of “house and home”—that is, if they are unable to find proper accommodation elsewhere.

As a consequence of the above, Dr. Mouat writes :—

1. “Hence, I am disposed to think that, in addition to placing Pooree itself under proper sanitary regulation, a pilgrim encampment should be formed on the sands, at the most eligible spot which can be selected each year by the local authorities. These camps should be moveable—as, do what you will, no earthly power can prevent a large body of natives from polluting the ground on which they dwell. The whole land for a considerable distance—some miles around the temple of Juggernaut—is holy ground; there is, therefore, practically an unlimited choice of encampments.

2. “The most economical means of forming such camps will be by wooden or iron huts, which are easily dismantled, can be purified and put in store for the many months in which

they will not be needed, and can be put up in ten days from the time of assemblage of the pilgrims for any great poojah."

Remarks.—This question of having a large camp or camps for the pilgrims outside the city involves many very serious difficulties, the chief of which would be the expense. Pooree is sadly deficient in the facilities for the formation of such camps. If wood was required, it would have to be brought from long distances; again, carpenters and workmen generally are few in number at Pooree. This is proved by the fact that a sufficient number of hands are sometimes with difficulty enlisted for the construction of the *ruths* or idol-cars. It is true carpenters and workmen might be sent for from Cuttaek and elsewhere. The cost of huts, whether of wood or of iron, would be very considerable. They would be required for a large number of people. They would cover a great deal of space. Great part of the sands is liable to be flooded, and good sites for camps are really not numerous. Let us suppose that it was arranged that 10,000 pilgrims should be so huddled,—the camp would cover miles of ground. Again, it would involve a separate conservancy establishment, separate latrines, a separate hospital or hospitals with the required staff, separate bazars, separate police establishment, &c., &c. I think corrugated iron huts would be the best. A camp constructed of wood or canvas, situated on the open sands, would be liable to rapid destruction by storms or fire. I am inclined to think the original cost of a good camp of the sort, for 10,000 souls, could not be less than 30,000 rupees; it might be much more. The cost and difficulties would increase in proportion to the numbers to be encamped. I do not, however, wish it to be understood that I object to the idea of a camp outside the city. Far from it. It is undoubtedly a good idea, and it would, of course, tend to relieve overcrowding in the city, which is a most important consideration. I have pointed to certain difficulties which, I think, would present themselves. But these might, doubtless, be overcome by expenditure of money. The advice of an Engineer Officer might with advantage be taken on such a point as this. I am of opinion that the appointment of such an officer, *to remain resident at Pooree*, is much required. This arrangement might, I think, at least be tried—say for a period of two years. The Summing Jheel to the west of the city ought to be drained. This alone would occupy his time usefully. Again, he would see regularly to the improvement of roads, and would advise the Health Officer on many collateral sanitary subjects.

A vast sheet of water at present stagnates in the shallow lake called the "Mytyani" or Muttya Nuddee, close to the city of Pooree, in a north-westerly direction; and Mr. Raban, in his Report on Pooree, tells us that "the town drains have been dug without any regard to levels, and often collect water where it is not wanted." It would be part of an Engineer Officer's duty to rectify such defects as these. Mr. Raban adds, "much might also be done by digging tanks and levelling the surface with the earth taken out of them." On the subject of encampment, he writes as follows:—"A suggestion has been made that, on the appearance of cholera, all the pilgrims should be removed from the town into huts to be provided for them on the sands outside the town. The arrangement proposed is similar to that of moving troops into cholera camps, but, in the present state of the law, it would be difficult to insist on the pilgrims complying with any regulation of the sort. Unless they were to be forced to return without accomplishing the purpose of their pilgrim-

age, they could not be entirely kept out of the town. Then great difficulties would arise in the case of female pilgrims accustomed to live in seclusion. But the practical difficulties would be very great. Materials for huts are very expensive at Pooree, and we have here no agency sufficient for the proper management of a large camp. Without very efficient supervision, I fear the evils would be increased."

I looked for suitable sites for encampments. Perhaps the two best are the following :—

1. Between Baleekund and Tikarpara.
2. Between Lokenauth Ghât and Hurchundsaye.

Regarding *moha-persad*, or so-called "holy food," Dr. Mouat writes as follows :—

"The provisions of the Penal Code do not appear to be sufficient to prevent the sale of moha-persad when it is really unfit for human food, and special provision should be introduced in the Act, which will doubtless be passed, to regulate the whole question of cholera among the pilgrims at Pooree, to secure that no such food is offered for sale or distributed gratuitously when it is more than twelve hours old, in whatever apparent state it may be at that time."

The food itself is thus alluded to, in an earlier part of his letter, by Dr. Mouat :—

"To crowding, bad food, and the other lædentia enumerated above, must be added the moha-persad or holy food, which is consumed by all classes of pilgrims during the festival. Samples of every kind of sacred food were procured for me by the District Superintendent of Police. They consist of rice, dhall, various pulses, ghee, and sugar, compounded in a dozen different manners. None of these can be said to be positively unwholesome for natives when fresh, although even then most of them are unfit for consumption by persons suffering from diarrhœa and dysentery. When examined after twenty-four hours even in January, putrefactive fermentation had begun in all the rice compounds, and after forty-eight hours the whole was a loathsome mass of putrid material utterly unfit for human use—the sweetmeats excepted. In them the ghee had become rancid, but is apparently not unpalatable to natives in that state.

"This food forms the chief subsistence of the mass of the pilgrims, and the sole subsistence of the beggars who flock in hundreds to the shrines during the festival. I was told that, in consequence of its sacred character, none of the moha-persad is thrown away. It is consumed by some one or other, whatever may be its state of putrefaction, to the very last morsel. The temples derive a considerable revenue from its sale, and whatever is unsold during one festival of such materials as do not putrefy at once, is stored within the temple, pounded up, mixed with fresh material, and disposed of at the next festival. I was informed that much of the sweetmeats was a compound of dead flies, rancid butter, and dirty sugar in varied proportions, in which the flies were sufficiently prominent to be distinctly visible. It is difficult to imagine any regimen better calculated to aid the crowding and filth in their evil influence on the human frame."

Remarks.—With regard to the entire subject of “holy food,” I must say I think there has been rather too much stress laid on it, both by Dr. Mouat and others. I do not mean to say that I consider the food to be beyond criticism; it is not so by any means. It is essentially uninviting in appearance, and on the whole very nasty, according to our European tastes. I obtained a number of specimens of it from the temple, and tried to get the very worst I could. I tasted them all, and was certainly not particularly delighted. I think, on the whole, that it is much on a par with the stale sweetmeats, the hard-bake and the wet gingerbread of our English fairs. The sweetmeats are of eight or ten different varieties of composition. These the pilgrims take back with them to their homes. They do *not*, however, take the holy *rice*-food away from Pooree. The Ooriahs are in the habit of cooking rice over-night and eating it in the morning. Such is the custom of the country.

From time to time inspections of the food are made by Hindoo Police Officers of good caste. In fact, it may be said that a regular supervision in this respect is now exercised. The “loroghars,” or eupboards where the food is kept by the servants of the temple, are looked into and overhauled from time to time by the Police. The Superintendent of the Temple promised, to Mr. Raban, that he would carefully watch the sale of food. It is very questionable if he does this with any care. He should, however, be required to cause regular inspections to be made within the temple limits. Fines are occasionally enforced on the “swars” or temple cooks. Mr. Rabau believes that great improvement has occurred in the general quality of the food, although there is still much room for further improvement. He is of opinion that the ordinary provisions of the Penal Code (Section 273) are sufficient to prevent the sale of food unfit for human consumption, and I am myself inclined to think that any fresh legislation on this point is unnecessary. Mr. Raban, in his letter No. 93T, dated 19th February, 1868, writes as follows:—

“If a Health Officer were appointed, it would be part of his duty to satisfy himself that no unwholesome food was offered for sale, and his influence with the keepers of lodging-houses and others might lead to the adoption of contrivances which can hardly be prescribed by law, but which would tend to improve the meals and comforts of the pilgrims.” There can be little doubt that good would result in this way.

The moha-persad is prepared in the *rooms* or cook-room of the temple by the *swars*, who are the only persons allowed to enter that place. The food prepared is said to be of fifty-four different varieties; but, in more general terms, it is usually described under two heads—

(a) The *Koth Bhog*.

(b) The *Miscellaneous Bhog*.

The first variety chiefly consists of sweetmeats. It is prepared *officially*, and for the especial benefit of the functionaries and servants in the temple. It is of superior quality, and the quantity prepared is not great. The cost of it is supplied directly by the Superintendent (the Rajah of Khoorda) from the temple funds. After being prepared,

it is presented to the idol, and then distributed amongst the priests and temple servants. Any surplus quantity that there may be, goes to the Rajah himself, and is sold. Only a small quantity of this *Koth Bhog* ever reaches the outside market.

The *Miscellaneous Bhog* is the usual food of the pilgrims whilst they remain at Pooree. It is prepared in vast quantities; the raw materials—rice, dhal, ghee, sugar, &c.—being stored in the temple godowns, whilst the fruit, vegetables, milk, and the like, which enter into its composition, are brought in, as they are required, to the cooking establishment. It is this food which, after being offered to the idol, is taken by the Pandahs or their servants, beyond the temple preeincts, for the general use of pilgrims. So much of it as is kept too long deteriorates, and becomes more or less unwholesome. Still it is so sacred in the eyes of the *jatree*, that no portion of it is cast away. Sometimes the Muthdars and Pandahs themselves send the materials for the food to the cooks in the temple, and have it there prepared for them. But the greater portion of it is made from the materials either stored in, or brought into, the temple. The quality of the food depends greatly on the wealth or poverty of the devotee. Paupers and wandering beggars have to be satisfied with what is old, stale, and uninviting. But little of the food is distributed *gratis*, even to the poorest. Perhaps more is given in this way to the “*Boishtnobs*” than to any other class. What remains unsold is not unfrequently re-cooked, with a certain portion of fresh material, and again brought forward as pilgrim food.* I heard of two varieties of sweetmeats which, consisting of stale unsold moha-persad, mixed with fresh *goor*, are known by the names *khoirchoo* and *kotkottee*.

The preparation of food is for the most part a monopoly in the hands of the temple cooks (*swars*); and, as a rule, it is only sacrificial food that is consumed by the pilgrims whilst they stay at Pooree. But this is not invariably the case; sometimes the pilgrims cook for themselves, and this is particularly the case when the prevailing price of moha-persad is unusually high.

Dr. Mouat recommends “the proper regulation of the pilgrim lodging-houses as regards space, ventilation, drainage, water-supply, and conservancy.” On this subject he writes as follows:—

“It may fairly be assumed that, during the *Ruth Jattrā*, the whole of Pooree is one vast Sarāi, and Act XXII of 1867 might at once be extended to it.”

Remarks.—There can be no doubt that the Pooree lodging-houses ought to be strictly regulated by law. The overcrowding that occurs in them, which I have already described, is probably one of the most powerful auxiliary influences in the production of cholera. Indeed, in the vast majority of instances where I have seen cholera occur badly in India, I have also observed massing of human beings—in other words, “crowd-conditions,” which are now termed by the learned *ochlic* or *ochletic* conditions. The influence of these in the production of

* I am indebted for most of the information here noted regarding “holy food” to a report written, some years ago, by Mr. W. C. Lacey, District Superintendent of Pooree, whose local knowledge of the place is very great.

septic animal poisons is very great, even more so in India than in Europe, and doubly great during the appointed seasons of cholera than at other times. The consideration of these facts is closely associated with the immediate causes of the great loss of life from cholera which has occurred at Pooree. Dr. Mouat recommends the introduction of the Sarāi Act to meet the case. Many of the provisions of the said Act are admirable and very appropriate to the case of the Pooree lodging-houses; at the same time, I think they might be brought under even better regulation.

The Sarāi Act does not provide for a Health Officer, which appears to me a very important point in connection with the present state of Pooree. It makes no charges for the registration of lodging-houses. Section 6, which relates to the production of a certificate of character by the keeper of a Sarāi, would be unnecessary in the case of all the lodging-house keepers in Pooree. Again, paragraphs 6 and 7 of Section 7 would scarcely apply to the case of Pooree.

The question of a Lodging-house Bill is fully discussed in a separate part of this Report.* It need not be further dwelt on at present.

With regard to the regulation of lodging-houses, and the social difficulties connected with the encamping of pilgrims outside the town, Dr. Mouat
Consideration of one result of the Lodging-house Bill. makes the following suggestions :—

“The regulation of the lodging-houses, by restricting the number of their inmates, will interfere with what are regarded as vested rights by the Pooriaris, or pilgrim-touters, who spread themselves all over India to collect pilgrims. Sufficient accommodation should be afforded in the camp for the people collected by each Pooriari, and be assigned to that Pooriari that they may remain together, which is their present custom; as it seems to me to be desirable that, in introducing so great a change, it should be made as little distasteful, and as little opposed to existing practices as possible.”

Remarks.—It would certainly be advisable, and indeed only fair, to allow the pilgrims, arriving as foreigners in the place, to remain near the guides whom they know; but, for my own part, I should have no compunctions regarding the vested rights of the Pooriaris; the more so, as such rights scarcely exist to the degree of making these individuals the masters of the pilgrims and of all the circumstances that may surround them.

The Government should exercise no control over the expenditure of the funds appropriated to the Pooree muths, and the services of the temple.

The Pooree Rajah cannot fairly be called upon to provide, from temple funds, for the proper accommodation of pilgrims. Nor ought he to be liable to fine, as has been proposed by some, for the sale of unwholesome food in the temple.

By Act X of 1840, the Rajah has full “control over priests, officers, and servants attached to the temple,” the only proviso being, that his acts shall be regulated “by the recorded rules and institutions of the temple, or by ancient and established usage.” The entire

superintendence and regulation of the temple is thus in the hands of the Rajah; and if its internal economy is not what it ought to be, the fault rests with him. He is, however, *required* by the Government to suppress, as far as possible, all abuses connected with the temple. The present Rajah is but a boy, and consequently he cannot be expected directly to exercise the necessary control. Yet it is very advisable that the regulation of a temple such as that of Juggernaut should rest with the Rajah or his representatives, and not with the British Government.

Establishment of new dispensaries and hospitals.

Dr. Mouat alludes to the establishment of new hospitals and dispensaries at Jellasure, Bhudruk, and Piplee.

Remarks.—I think there is a very great want of hospitals and dispensaries along the high road through Orissa.

I would suggest, *1st*, that there should be a good dispensary at Damooderpore, which is eight miles from Pooree on the Cuttaek road.

2nd. There should be a good-sized pilgrim hospital at Piplee, which is “a favorite halting place,” twenty-six miles from Pooree, on the main road.

Piplee is only nine miles from Bhubanesur, where many thousands of pilgrims annually congregate. It is a missionary station; and at present all the public charity which is carried out there is conducted by the missionaries. They told me that a great deal of physical misery presented itself to them which they could not possibly relieve: they much desire to have a hospital there. I think it is *urgently* required.

3rd. There should be a good dispensary at Bulwunta, which is about half-way between Piplee and Cuttaek.

In the Balasore *District* there are *dhurmsalas* (resting-places)—at Balasore itself, at Bhudruk, at Bustah, and at Rajghât. I saw those at Bhudruk and Balasore; they seemed to me to stand greatly in need of repairs. I was informed that the others were in much the same state. Those at Bhudruk and Balasore are in a dirty tumble-down condition, and I believe the roofs are considered insecure. They ought not to be allowed to remain as they are; they should be made thoroughly secure, white-washed, cleansed, and looked after. Originally they must have been capacious buildings, well-constructed, and admirably adapted to the purpose for which they were intended; and their sites are good. They have simply been allowed to go to ruin; and pilgrims, as a rule, do not care to frequent them. All this is much to be regretted. I was informed that the real secret of the decay of these very useful establishments is want of local funds. This should, in my opinion, not prevent the Government from having good resting-houses at regular intervals all along the road for the convenience of wearied pilgrims. At each of the *dhurmsalas* (wherever they are found) it would be very easy to have a small branch dispensary, in one of the apartments, at either extremity of the building. At all such resting-places the conservancy arrangements ought to be very carefully attended to. At Bhudruk, however, I think there should be a hospital. Dr. Mouat is of the same opinion: indeed, so far back as 1855, he recommended this. In his

memorandum under consideration, he alludes to a particular site which he considered suitable for the purpose. In passing through the place I went to the spot indicated, and I was informed that it had lately been selected as the site for the new Cutcherry.

I next find Dr. Mouat writing as follows (p. 9) :—

“The measures necessary to prevent the spread of cholera on the line of march of pilgrims are few and simple, and seem to be already in force in the Punjab and the North-West Provinces.

“The most important of all is to cleanse, purify, and place all great towns and villages on the road in the best possible sanitary conditions ^{The cleansing and purifying of towns.} to resist the invasion of cholera, whether carried by human agency, or caused by atmospheric or other conditions not yet known or explained. This will doubtless be one of the special duties of the new Sanitary Officer.”

In such an opinion I concur. Herein lies a very important section of my duties as a Sanitary adviser to the Government. This brings me, then, to the consideration—What arrangements should be made for the cleansing and purifying of towns and villages in Orissa? Under this head I shall at present confine my remarks to Pooree itself. The same principles apply broadly to all places.

There should be a large and permanent conservancy staff at Pooree. The number of ^{Of Pooree in particular.} scavengers ought to be unusually great, the size of the place not being considered so much as the number of pilgrims resorting there. All accumulation of dirt in streets and public places should be prohibited; all the sweepings should be taken away, twice daily, under regular direction, to suitable sites well removed from the town. All stagnation of water about dwellings should be prevented. All cesspools should be abolished; the condition of sewers should be improved. Above all, the impregnation of the soil with decaying animal matter, or its infiltration and saturation with fluid excreta, should be stringently guarded against; and equal anxiety ought to be continually exercised for the prevention of the slightest possible contamination of the water of wells and tanks. Wherever air or water is being vitiated by the products of organic decomposition, there the exertions of the conservancy staff ought to be specially brought into operation, until purity is attained.

It is not only the large streets and principal thoroughfares that must be attended to, but even the narrowest of them must be regularly swept, and in every way systematically kept clean. It is almost superfluous to state that the chief causes of insalubrity often lie in obscure and somewhat out-of-the-way places. It ought to be the special duty of the conservancy overseers to pay attention to the purification of such localities, which are perennial foci of disease.

Public latrines ought to be erected; no public place should be defiled; offenders should be punished. So long as persons have private arrangements for the calls of nature, and these are suitable and unobjectionable, they should be permitted. But all waste grounds and

hollows and out-of-the-way places must be kept absolutely clean. The Police should see, strictly, to this.

The latrines should be of a good standard plan: they should be roofed over, and yet free ventilation of air should be provided for. The dry-earth system alone should be adopted. All dejecta, whether from these public latrines or from other sources throughout the town, and whether of man or animals, should be carefully removed, twice daily, to partieuclar well-selected localities outside the town. At these localities the usual well-known system of shallow trenches should be had recourse to, and these must be carefully inspected by competent and well-trained individuals. All the deodorized filth should be utilized. There is really no difficulty about carrying out such a system. It is exactly that which is adopted, on a limited scale, in connection with every jail in India. In the latrines a certain amount of McDougal's powder might be in use. But, after all, constant supervision, systematic removal of the ordure, and the careful covering of it with well-sifted dry earth, are the essential requirements. A sufficient number of conservancy carts is a *sine qua non*.

The above is an outline of what should be done. Under the management of a Health Officer, and with a sufficient sum of money at his disposal, the whole scheme would present no real difficulties.

I made enquiries as to the most suitable localities for public latrines in the town, and the following are four sites which would probably be found to serve the purpose very well :—

Sites for latrines.

1. In the neighbourhood of the Markoondsaye tank,—in a north-westerly direction (not, of course, actually near the tank).
2. Between Hurchundsaye and Lokenath Ghât road, in a westerly direction.
3. About Juggernaut Bullub Garden, in the vicinity of one corner of Chundun Talao.
4. To the south of Kalka Dabyesaye.

Deflection of pilgrim routes.

The next three suggestions offered by Dr. Mouat appear in the following extract :—

“I think it is right to prevent the great body of pilgrims on the march from crowding into the towns on their line of march; for the crowding, filth, and other insanitary conditions caused by such bodies would be likely to produce an outbreak of the pestilence in a dirty, undrained, unwholesome locality, by tainting its water-supply and polluting its atmosphere.

“Hence, the deflection of the travellers by some route outside the town is a wise and judicious measure; but it should be accomplished with the least possible suffering and distress to the weary, footsore, depressed, and suffering. Proper markets for the supply of wholesome food, proper camping grounds and shelter, and a wholesome supply of water, should be provided in the immediate vicinity of all large towns.

“These will be costly measures and of very doubtful efficacy, whatever may be the real nature of cholera, if the sanitary condition of the adjacent towns is not most carefully regulated.”

Remarks.—I entirely agree with Dr. Mouat in these opinions. There is no reason why pilgrims should make resting-places of the bazaars of large towns. It involves no real hardship to prevent their doing this. As British regiments marching up-country have their regular halting-places marked off, so might it be arranged for pilgrims in the vicinity of large towns. The deflection of their route need not be such as to entail any great extra fatigue or inconvenience. The arrangement is already in force at certain places, as at Cuttack; and such a matter may well be left to the judgment of the Civil Authorities. At the same time, it should be made known that pilgrims must not be turned back to any great distance, and that their onward route, if it is to be rendered circuitous, must on no account be hindered altogether. In my opinion, the compulsory detention of pilgrims, anxious to proceed to their homes, is both ill-judged and unjustifiable.

Dr. Mouat thus writes on this subject:—

“No attempt should be made to bar the road, and to throw unnecessary difficulties in the return of the pilgrims to their homes. Such steps would not only be cruel and inhuman, but would result in the pilgrims eluding all cordons and quarantines, avoiding the great lines of communication where they can be subjected to some control and observation, and dispersing themselves all over the country. They would thus carry the disease into remote corners hidden from observation, and each of these would become a centre of contagion, according to the prevailing doctrine on the subject.”

• Mr. F. W. Molony, Famine Commissioner at Cuttack, in his letter to the Junior Secretary to the Government of Bengal (No. 844, dated 4th March, 1868), writes on this subject as follows:—

“The proposal to detain pilgrims during the period of an epidemic would seem impracticable, and would subject them to a great deal of hardship and a greater amount of danger than they at present are exposed to. It would appear rather advisable to disperse them as quickly as possible, taking precautions against their spreading the disease. In cases only of persons actually suffering from the disease should detention be insisted upon.”

Before they commence their pilgrimage, it may be well to let the people know that cholera is prevailing at Pooree or elsewhere; and it may also be right that local officers should endeavour to dissuade the people from undertaking pilgrimages, particularly during unhealthy seasons. And, again, the pilgrims might be warned, as has already occurred in certain parts of India, that if they determine to undertake pilgrimage, they may be liable at any time to find themselves subjected to necessary sanitary regulations. But once the pilgrim has actually commenced his journeyings, he should, in my opinion, nowhere be restrained by cordons of detention, unless he is actually suffering from cholera, in which case he should certainly be isolated at once.

Sir Richard Temple at one time expressed the opinion (*vide* letter of Secretary to the

The question of persuading pilgrims to postpone pilgrimage at unhealthy seasons.

Chief Commissioner, Central Provinces, to the Secretary to the Government of India, No. $\frac{5685}{424}$, dated Nagpore, 9th December, 1867) that any measures which can be taken to prevent the resort

of pilgrims to those shrines *at unhealthy seasons*, without too violent interference with the religious feelings of the country, must be productive of unmixed good. This is very true. Not only is the mortality increased during particular unhealthy years, but a great part of it depends on the fact that certain of the very largest pilgrimages are undertaken at those particular seasons of the year when cholera appears by natural law; and so it is that vast numbers of lives are lost, which at other seasons of the year would be but slightly endangered, if at all.

Were it, therefore, possible to induce the people to alter the date of some of their great festivals, there is no doubt that the mortality attending them would be greatly decreased. But I fear this will be found, in the majority of instances, *in Orissa*, to be impossible. Most of the festivals occur at particular phases of the moon, and when certain astrological observations can be made; and great weight attaches, in the native mind, to such facts as these. As for the executive authorities in Orissa being able to induce pilgrims, desirous of returning from Pooree, to remain there until healthy times of year (as has been suggested in a letter from the Secretary to the Chief Commissioner, Central Provinces, to the Secretary to the Government of India, No. $\frac{505}{307}$, dated Nagpore, the 18th October, 1867), I think this will be found to be quite impossible, nor would such a measure be free from grave sanitary objections.

Whenever pilgrims are deflected from public markets and bazaars, every facility ought to be established, on their actual line of march, for their obtaining necessary requirements when pilgrims are deflected. necessary supplies without difficulty; and it is also very easy at such times to afford them opportunities of obtaining such medical relief as they may require.

Dr. Mouat's next suggestion is the following:—

“At all the great points of intersection of roads, and at all the principal ferries across the chief rivers which are unfordable in the rains, means should be taken to relieve sickness when found to exist, and to facilitate the transit of the pilgrims. It was at the ghâts that I found the chief sickness and suffering in my journey to Pooree in 1855-56.”

Remarks.—This year a Native Doctor was sent to Damooderpore, *i.e.*, to the ferry over the Bhargovi, where the pilgrims are most crowded. More would have been sent to other points, but none were available. There seemed to me to be a great want of Native Doctors in Orissa. I have already indicated where it appears to me most advisable that hospitals or dispensaries should be erected. As Dr. Mouat observes, the pilgrims are not unfrequently delayed at the ghâts. There are numerous rivers in Orissa which they must cross on their homeward route. They are sometimes detained, *for days*, at those ferries. The presence of more boatmen and the establishment of a small branch dispensary at such localities would be of undoubted service.

I have now, I think, considered all Dr. Mouat's important suggestions, with the exception of those regarding a Pilgrim Sanitary Tax and Quarantine. These subjects I shall take up separately.

Additional proposals. There are other proposals which I think it well to submit to the Government regarding Pooree, and the main pilgrim routes leading from it.

I think there should be a separate cholera hospital at Pooree, where the sick could be thoroughly isolated. This spot should be conspicuously marked, and made generally known. There might also be one or two temporary cholera sheds in the town for the immediate reception of those whom it seems inadvisable to remove to any great distance. In the part of the town between Churungsaye and Markoondsaye a suitable site might be found for one such shed. I made enquiries as to a good site for a cholera hospital. Probably one of the best would be beyond the southwestern extremity of the town—on the sands. Such a hospital should have a regular staff of well-trained servants attached to it. They should be regularly disciplined to their duties. There should be a sufficient number of doolies specially retained for the removal of those affected with cholera. The conservancy measures in and about such a hospital should be carried out with unusual care. The amount of air in such an establishment should be double that allowed in ordinary hospitals. All dejecta should be subjected, with the greatest vigilance, to the action of disinfectants. The clothes of all persons dying in the hospital, as also all rags and cast-off linen, should be completely destroyed by fire.

The beds might be made of straw, which could also be burnt. If cots are employed, they should be used only for cholera patients.

A branch dispensary. A branch dispensary might be established at the site of the present dhurmsala in the Burra Dund.

More dhurmsalas are required. A double advantage would attach to having these. In the first place, the most dirty, weak, and indigent persons would be brought together; and, again, facility would be afforded for ensuring the cleanliness of their surroundings, which, if unattended to, become true centres of disease. Each dhurmsala would require to have a separate and ample conservancy establishment attached to it.

Houses in which cases of cholera occur ought to be subject to systematic medical inspection, such as is provided for in the Draft Lodging-house Bill submitted in another part of this Report.* Domiciliary visits should be regular.

Dwellings or apartments in which fatal cases occurred might require to be thoroughly cleared out and disinfected. A consequence of such measures would be the establishment of houses of refuge for the reception of those who might be turned out of contaminated dwellings. These houses of refuge would require to be supervised by persons held responsible for their proper regulation.

* Part III.

I am of opinion that two or three Native Doctors should be “told off” for the special duty of continually visiting all parts of the city, and of affording immediate relief to those attacked with cholera or with premonitory diarrhœa. This [watching of public health by a sort of medical patrol would, I think, be of considerable service.

Statistics of cholera, and of general sickness and death from all causes, should be collected according to some good organized plan. Very early information regarding every attack of cholera should be provided for with especial care.

A record should be kept of every case admitted into hospital,—showing the age, name, sex, and caste of the patient; the hour of admission; his usual place of residence (*i.e.*, his home); the length of his stay at Pooree; the house from which he had arrived; the hour of attack; his condition on admission; and notes on the treatment of the case, and the result. A Statistical Return should be made out of the “daily progress of cholera,” and a careful record of the same should be preserved, for purposes of after-reference, in the Magistrate’s Office.

It should be notified to the people, by beat of drum, where they can receive medicines gratuitously, and where hospitals, dispensaries, and resting-places are situated; and by placards, handbills, or the like, simple hints in the vernacular might be issued to them regarding the necessity of early application for medicine, the significance of premonitory diarrhœa, the importance of drinking pure water, of being careful as to diet, &c.,—in a word, regarding all points of general prophylaxis. Many would not understand these; some of the pilgrims would do so.

Cremation should in all cases be complete. The cremation of every corpse should be complete. No persons should be allowed to leave bodies half consumed.

The corpses of those dying from cholera should, as often as possible, and immediately after death, have quicklime placed about them. The enumeration of bodies brought for cremation should be the business of a small separate establishment; the statistics thus furnished would afford a test of the accuracy of the general returns of mortality collected in the town.

Disinfectants should be freely used, chiefly in the cholera hospital, and at every place where even a single individual is found suffering from cholera; also in latrines, sewers, drains, &c. I cannot at present enter into the general and very important subject of disinfectants and deodorants. Those most useful in India are probably the following: carbolic acid, McDougal’s powder, chloride of lime, chloride of zinc, sulphur, charcoal, sulphate of iron, sulphurous acid, and, *above all*, dry earth and pure atmospheric air.

If it were possible, people ought to be prevented from bathing in the Chundun Talao, but I am afraid this is not practicable. One of the chief objects of pilgrimage to Pooree is to bathe in this sacred tank.

I think it is worthy of consideration whether both the Indradumminee and Markhoond tanks could not be set apart for bathing, reserving the Chundun for drinking purposes, or *vice versa*. The four most sacred reservoirs are the following: The Sait Gunga, the Markhoond, the Indradumminee, and the Chukkur Tirt'h on the sands.

The Ranee Talao, near the Athara Nullah Bridge, might, I think, be reserved for drinking purposes.

If none of the existing sacred tanks can be set apart as above indicated, I think two or three good tanks should be constructed for this special object. The cost of construction, without masonry sides, would probably be about Rs. 5,000 for each.

Public funds should be specially set apart for the regular clearing of tanks and wells. This should be undertaken during the cold season. The clearings of the tanks should be carefully carried well away to safe localities. Good drinking water should be within the reach of all.

In an extract from a letter, No. $\frac{3519}{312}$, dated 30th August, 1867, from the Secretary to the Chief Commissioner, Central Provinces, to the Secretary to the Government of India, Home Department, I find it stated that, "in order to obviate one of the supposed causes of cholera in Chutteesgurh, the Supreme Government (Foreign Department), in the year 1865, granted certain concessions to people who might sink wells and provide Chutteesgurh villages with drinking water."

This appears to me a very happy idea, and one which, if judiciously extended, might be productive of very useful results.

Again, it appears well worthy of consideration whether *drinking fountains* might not be established both at Pooree and on the main pilgrim route throughout Orissa. Some would doubtless at once reply—
Drinking fountains. "The people, from caste scruples, would never think of using them." I am inclined, however, to believe that such would not be the case, and that thousands of thirsty, way-worn mortals would be glad to avail themselves of the refreshing delight afforded by a drinking fountain. It is possible that Norton's tube-wells might here be applied.

With regard to the question of caste, I would only point to the fact that in England, in the minds of our own ancestors, "the prejudice against the use of coal as an article of fuel was such that a law was passed ruling it a capital offence to burn it within the city of London; and there is a record in the Tower importing that a person was tried, convicted, and executed for this offence in the reign of Edward the First." It was otherwise in the reign of Charles the First.

As we English have got over our prejudice against coal, so in time might pilgrims waive their objections to the use of drinking fountains: and it is a matter of fact that within the walls of Fort William our sepoys may any day be observed using such fountains without the slightest compunction, and with evident delight.

It would be a great blessing to the pilgrims if wealthy native gentlemen would interest themselves in the securing of a thoroughly good water-supply for the wanderers through Orissa. In 1810, Rajah Sookmoy Roy gave Rs. 1,50,000 towards making a road to Pooree (Peggs., p. 290). Would that Rajahs of the present day were inclined to be equally munificent as regards the question of sinking good wells and erecting drinking fountains. Should this idea ever be acted up to, it is evident that all such fountains should be situated on raised and clean sites.

All the sanitary suggestions offered above would apply to Bhubanessur and Jajipore as well as to Pooree. The requirements of these places are exactly similar; Suggestions regarding Bhubanessur and Jajipore. the only difference being that those at Juggernaut are on a larger scale than elsewhere.

It appears to me desirable that small parties of mounted police should patrol the main road along which the pilgrims pass, so that early reports of prevailing sickness and mortality might be obtained and acted on. Police patrols on roads.

I presume to suggest to the Government that great and permanent advantages would accrue, not only to the pilgrims from all parts of India, but also to the people of Orissa, if a Medical School could be established in Orissa, from which Native Doctors and Compounders might be sent forth for the special work of medical relief on pilgrim routes. Were such an idea to be entertained, Cuttack would probably be the best place for the establishment of such a school. A Medical School in Orissa.

Lastly, in connection with all that may be required for the proper regulation of pilgrimage on a large scale, I should be glad if the Government would allow me, during the coming year (1869), to visit, in my official capacity, Hurdwar, Conjeveram, and the chief shrines of Madras and Bombay, when large numbers of pilgrims are there assembled, in order that I might collect all available practical information on so important a subject. A Sanitary Officer might be deputed to visit Hurdwar, and the chief shrines of Madras and Bombay, during large assemblages of pilgrims.



PART II.

NARRATIVE OF A VISIT

TO

THE TEMPLES OF JUGGERNAUTH, BHOBANESSUR, & JAJIPORE,

&c., &c.

PART II.

NARRATIVE OF A VISIT TO THE TEMPLES OF JUGGERNAUTH, BHOBANESSUR, AND JAJIPORE,

ON THE OCCASION OF THE CAR FESTIVAL OF 1868 ;

AND OF A TOUR THROUGH THE PROVINCE OF ORISSA.

I left Calcutta for False Point in the Steamer *Undaunted* on the 11th June. The weather looked unsettled, and the barometer was low, and falling.
Departure from Calcutta. We anchored below Mud Point at 2 P.M. of the following day ; a very strong gale set in from the south-west, which continued with such severity that the steamer could not put to sea for five days. The gale was accompanied with heavy and continuous rain. The mercury stood at 29°40, and the diurnal barometric wave was not observable. On the 17th we got under weigh. At Saugor a large number of ships were riding to double anchors, afraid to enter the river or to put out. We saw two vessels aground, and others were damaged. In passing through the Eastern Channel, a high sea was running.
Detention of steamer by stormy weather.

On passing the Ridge Buoy, we found that the pilot-brig had been blown from her station. We reached False Point at 3 P.M. of the 18th. For some miles outside the anchorage the water was brown and muddy, showing to what degree the late heavy rains had produced strong freshes in the Mahanuddy river.
Reach False Point.

Before daybreak of the 19th, I left the *Undaunted* in one of the ship's boats, kindly placed at my disposal by Captain Pearson. After four hours' pulling we reached the mouth of the Mahanuddy, where we fell in with a small "green boat" (*dinghee*), which had been sent for me from Toldunda.
Leaving the steamer.

The Mahanuddy was immensely flooded; it had entirely inundated its banks, and high trees were half submerged in its waters. The current of the river against which we had to contend was very strong. We could only advance by "punting" with long poles, and by laying hold of the branches of trees on the side of the river. This was necessarily slow work.

The river, with its rapidly flowing current and densely wooded banks, presented a very picturesque scene. I could almost fancy myself in the wilds of Africa, slowly working on towards some great Nyanza. The dense foliage on either bank appeared as though it were afloat on an endless and terrible swamp; no sound broke the universal stillness but the shrill cry of the king-fisher and the carrion-crow pursuing their prey, or the wild booming note of some unseen aquatic bird, echoing through the impenetrable forest. This great flooding of the largest river in Orissa, which takes its rise upwards of five hundred miles from where I then was, at once conveyed to the mind an idea how much the forces of nature are as yet superior, in the course of the Mahanuddy, to those of man. It is to be hoped that, in the course of years, the waters of this river may be under entire control, to its very estuary. This much-to-be-desired object has already been achieved to no slight degree higher up the river, by the construction of that magnificent public work—the *Anicut*, or great weir thrown across the river at Cuttack. When all the waters of Orissa can be thoroughly commanded and distributed, at will, over the different parts of the province, through the media of canals, reservoirs, and the like, the prospects of the country will be improved tenfold, and we shall then hear but little of destructive inundations and desolating famines. Science and capital have yet a great work before them in Orissa,—one in many respects resembling what has been effected on so large a scale by the construction of the canal works of Egypt.

We passed the rice *gola* (granary) at Karanassa at 9 A.M., and Bakoot at 2 P.M.

Beyond Bakoot we crossed the river and bore a little to the southward. The whole face of the country was under water, to the depth of four or five feet. The rice-fields were entirely submerged, and the villages were inundated. In some of these the villagers had constructed stages (*maicháns*) inside their houses, on which they sat, waiting for the issue of the flood, which was still rising in their dwellings. We reached the village of Burhaie at 6 P.M. It was altogether surrounded by water. I talked with the villagers, and found them civil and willing to lend me any assistance in their power. I asked them about prevailing diseases, and was, on the whole, surprised to find them so healthy. Not one of their number was suffering from fever, and I could not detect any signs of chronic spleen disease. There was one case of rheumatism, and several individuals were suffering from cough. To please them, I gave them medicine from a portable case I had with me; they evidently placed deep reliance in European drugs. They informed me that they were then getting rice at twelve annas a maund (from the Government *gola* at Toldunda), which certainly indicated a very favorable condition of things. That night I slept in the

boat, which was moored at one side of the village, the surroundings of which were in anything but a satisfactory state of conservaney.

I left Burhaie at daylight of the 20th, and reached Toldunda at 10 A.M. In the afternoon left Toldunda and went on to Chandpore, where I had again to sleep in the boat.

Here I discovered that my dâk had kindly been laid by the Magistrate of Cuttack, but as I was a week behind time, and no news had been received of the *Undaunted*, the dâk-bearers had been recalled. During the night sent back from Chandpore to Toldunda for bearers, who arrived next day at noon. Meanwhile I had, when day dawned, bivouacked under a peepul tree; and on walking about I came upon the remains of hamlets which had been depopulated by the famine of 1866. At Chandpore parted with the boatmen who had brought me from False Point. But for their exertion and willingness, I should not have got up the river at all.

I left Chandpore at noon of the 21st, reached Joypore at 3-30 P.M., and Maunpore at midnight.

Reached Fakirpore at 7 A.M., and got into Cuttack at 10 o'clock of the 22nd instant; was there kindly received by Mr. Ravenshaw, the Commissioner of the Division. Left Cuttack that night, and was delayed considerably on the way, from the absence of bearers at different stages.

Arrival at Pooree. Reached Pooree at midnight of the 23rd June.

I had been anxious to get to this celebrated place before dark; but this I found to be impossible. My first view of the city was by starlight. As I passed up its principal street—the “Burra Dund”—which is nearly a mile long and very broad, I observed, chiefly at the far end of it, many thousands of pilgrims lying on the ground, sleeping quietly; there was no noise; here and there a small wick lamp was burning, which had been lit by one of a party of individuals lying huddled together, a little apart from the rest of the slumbering crowd. The scene was peculiarly impressive. Those numberless men and women, enjoying much-needed repose, had come together from every point of the compass,—many of them from very distant places,—all actuated by the one burning desire to reach Juggernaut. Here at last they had accomplished their desire, and, wearied with the accumulated fatigue of many marches, they lay in perfect stillness on the bare ground. Not a sound was to be heard; the stars yielded faint light, and before me I saw, as if in dreamland, an army of religious enthusiasts, who, in the fervour of a fanatical creed, had completed a pilgrimage which, to the Hindoo mind, is the surest *viaticum* to a happier state of being. Passing quietly through this crowd, I soon saw, looming in the darkness, those great idol-cars and that temple regarding which so much has, at different times, been written.

In consequence of detention during the trip from Calcutta, I had arrived just too late to see the famous idol taken out of the temple and deposited in its car. But this did not much matter, as in every single respect but this I could still make myself familiar with all the circumstances attending the great *Ruth Jatra* or Annual Car Festival.

Orissa has been described by one who lived in it for many years in the following words :—"It is to India what Jerusalem was to the whole land of Israel. It is the holy land of the Hindoos. As the Israelites went up to worship at Mount Zion, so do the inhabitants of the various provinces of India go on pilgrimages to the great temple of Juggernaut." (Sutton's "Orissa and its Evangelization," Preface, p. 8).

A Hindoo sage, Bharadwája Muni, describing this country to his pupils, said: "Of all the regions of the earth, Bharata K'hand" (*i.e.*, Hindoo India) "is the most distinguished, and of all the countries of Bharata K'hand, Utkala" (*i.e.*, ancient Orissa) "boasts the highest renown. Its whole extent is one uninterrupted Tirt'h" (place of pilgrimage). "Its happy inhabitants live secure of a reception into the world of spirits, and those who even visit it, and bathe in its sacred rivers, obtain remission of their sins, though they may weigh like mountains." (*Vide* Stirling's very able Article on Orissa, in Vol. XV of the Asiatic Researches, p. 166).

Sir Archibald Alison, in his "History of Europe" (Vol. XI, p. 100), writes of Orissa as "this rich and highly important province, a link lying on the sea-coast between the Presidencies of Bengal and Madras."

Pooree, or Púrí, is in the southern part of Orissa, in latitude 19°49' north, and longitude 85°54' east, distant about 300 miles from Calcutta and 49 miles from Cuttack.

It is the most revered city in the province, and almost in the heart of the city is the temple of Juggernaut. I mention this, as I find that the International Sanitary Conference which assembled at Constantinople in the beginning of 1866 allude to Pooree as a town "in the neighbourhood of Juggernaut." (*Vide* p. 73 of the Proceedings of the Conference.)

Laurie alludes to Juggernaut as "a venerable fane of Hindoo reverence." He states that pilgrimage thither "is one of the most important acts of observance enjoined to a Hindoo in the ritual of his religion." (*Vide* "Orissa and the Temple of Jagannáth," by William F. B. Laurie, Lieutenant, Madras Army).

Sutton alludes to the Car Festival of Juggernaut as "the general meeting of the Hindoos of all India." (Op. Cit., p. 56).

The very ground around Pooree for ten miles is, to the Hindoo mind, of such sanctity as to absolve from the deepest sin all who proceed thither. Characteristics of Pooree, as believed in by pilgrims. The priests of Juggernaut speak of it as "the city of heaven upon earth." They say that "the fruit of the trees there is as the fruit of the tree of life;" that "the tanks contain the waters of immortality;" that "to bathe in them is far more meritorious than to bathe in all the sacred rivers of India;" that "the people are all holy;" that "the goddess of Fortune resides there;" that "pilgrims may actually eat of food cooked with her own hands;" that "the gods of heaven ever and anon send showers of beautiful scented flowers upon the city;" that "all the celestial deities would delight to become incarnate there;" that "the very dust of the city is pure gold;" and that "the great idol is so mighty and gracious that he pardons the sins of those who may have killed a million Brahmuns." (*Vide* "Sketch of the Orissa Mission," p. 13).

In the Part I of this Report I have endeavoured to show that, in reality, the said city of Pooree is anything but "a heaven upon earth," in a sanitary point of view; its tanks, I am afraid, contain the waters of death and not those of immortality; the scents appreciable in the streets are other than those of fragrant flowers.

It is to this place Pooree and to this temple and idol of Juggernaut that, for seven centuries, Hindoos have thronged,—weary, footsore, feverish, yet ever patient under fatigue, toil, and hardship, to get that sight of their god which they believe "obliterates the transgressions of a whole life." Their belief being what it is, we can scarcely wonder at that invincible enthusiasm which urges them on to a place so sacred.

It was in this place that I found myself at midnight. Before me, placed across the road, were the three curious cars of Juggernaut, Bulbudhra, and Subudhra; behind them, in dim outline, the famed temple of Juggernaut, holiest shrine of the Vaishnavas; and all around lay tranquilly that multitude of pilgrims who had come to pay homage to a painted idol which they believe to be "Lord of all the world."* The stillness of night heightened the sense of mystery which gathered round so many human beings congregated from far-distant homes for purposes of deep-felt devotion.

The pilgrims before me, and such as they, have incurred abundant abuse in the pages of many writers who have discussed their acts. Their moral blindness, their wickedness, their very degradation have but too frequently been made the subject of uncharitable declamation.

* The Editor of the *Calcutta Review*, in a foot-note, p. 205, Vol. X., 1848 (Article "Puri and the Temple of Jagannath"), gives the etymology of the word thus:—*Jagad* (in composition *Jagan*) world, and *Nath*, lord—"Lord of the world."

This is much to be regretted; a spirit of religious bravery brings them to Juggernaut, and perhaps it would be better if we did not disdain such pitiable beings. I would plead, even to the Government, the cause of extended charity and benevolence towards poor creatures who, being ignorant, distressed, and uncared for, I have (and this not seldom) heard spoken of in terms of heartless abuse.

It will appear, in the course of this Report, that I have a particular object in pointing to the sad state of the poor *Jatree*, in whose behalf the Government has evinced a certain amount of solicitude, but for whom, I trust, yet much more may be done. Very deplorable are the misfortunes of the pilgrims in Orissa, and it seems to me very necessary that this class of people should be regarded, not with aversion and harshness, but with feelings of sympathy and genuine human kindliness. Even with protection, assistance, and commiseration, the fate of the Indian pilgrim is by no means a happy one, as I shall presently show.

Leaving the temple and the scenes that surround it, I found my way to the Staging Bungalow, where I remained the night.

The following day I communicated with Mr. Raban, the Magistrate and Collector of Pooree, informing him with what object I had visited the place, under the orders of the Government of Bengal. He invited me to stay with him, expressing his desire to enter into the spirit of my enquiry, and offering me every assistance in his power.

I accepted Mr. Raban's offer of hospitality, and was his guest during the period of my stay at Pooree, which extended over ten days. I cannot refrain from bringing to the notice of the Government that Mr. Raban afforded me valuable official assistance, that he placed me in such a position that I could personally make full enquiries, on all sides, regarding the state of Pooree and the circumstances of pilgrimage to it, even directly from the *Pandahs* of the temple and the *Mohunts* of the native monasteries (*Mut'hs*). He also accompanied me daily into the filthiest purlicus of the place, where I found (almost to my surprise) that a sense of duty had often led him before then. For great part of all the information I now possess regarding Juggernaut and its votaries, I am indebted to Mr. Raban, who himself takes a deep interest in all that relates to the possible mitigation of the abundant evils attending the annual pilgrimage through Orissa.

During the day we discussed the subject that engaged my thoughts, into which he was always ready to enter with avidity; in the afternoon we proceeded towards the town, to observe the assembled crowds, to see the cars being dragged along, and to watch the general progress of the festival. I again found myself on the same ground where I had made observations the night before. The scene was now very different. The same masses of

people were there, the same cars, the same surroundings. But it was now the hour when the sun was blazing before it set, and everything was astir. The spirit of religious fervour

Religious excitement prevailed. was up and awake; there was no mistaking it; the cars bearing the idols were to advance; tens of thousands of

The crowd of pilgrims. pilgrims were aware of the fact, and had their attention fixed in one direction. The priests were assembled on the cars;

The priests and musicians. musicians also were there on the surrounding platforms, with various instruments, from which they evoked wild and discordant sounds. The preparations were gradually completed;

and at last the signal was given that the god Juggernaut would be pleased to be dragged along by that throng of enraptured beings, who at once either shouted aloud with joy, or silently cast themselves on

The advance of the cars. their knees and bowed their foreheads to the dust, in solemn acknowledgment of the idol's supremacy. Each car is pulled forward by two coir hawsers or cables, of great length, on both sides of which are placed those who drag. These functionaries are called "Kalabetiahs;" they are assisted in their efforts by the crowd. One car advances at a time, and, creaking, slowly progresses along a deep rut. As advance is made, the excitement heightens; the

The excitement at its height. people yell with delight; the priests ("Dytahs," or charioteers) advance up the projecting planks, which are fixed in front of the car, with long canes in their hands, which they wield with excited (and sometimes, it is said, with obscene, ithio-phallic) gestures. The musicians raise demoniacal sounds from conchs, tom-toms, bugles, bells, cymbals, tambourines, and gongs. The street resounds with deafening turmoil; yet clear above all is heard that shrill utterance of frenzy "Jye Jaganáth!" "Jye Jaganáth!" (Victory to our god Juggernaut! Victory to Juggernaut!) and the wailing of women calling aloud "Hululu!" "Hululu!"

It was in moments of maddening excitement, such as I now describe, that, in former years, devotees were inflamed with a desire to die beneath the wheels of that great car, casting themselves down before it as it advanced, and being crushed beneath its weight. It is a happy thought that such human sacrifice is no longer tolerated by the Government; and, indeed, each car has now a strong netting, hung at some distance in front of it, to prevent the possibility of a human being passing beneath the wheels. There are still living, however, those who have witnessed such appalling and ghastly sights, the descriptions of which are amongst the records which must for ever blacken the annals of this celebrated shrine. Lauric, writing in 1850, observes:—"It is perhaps useless to state that human sacrifice under the wheels of the car has long been abolished" (p. 48). But Sutton, whose work was published in the same year, informs us that devotees were still at that time occasionally crushed beneath the car. I am inclined to think that Sutton does not here speak from personal knowledge of the facts; because Stirling, so far back as 1825, thus writes:—"During four years that I have witnessed the ceremony, three cases only of this revolting species of immolation have occurred, one of which, I may observe, is doubtful, and should probably be ascribed to accident; in the other two cases the victims had long been suffering from some excruciating complaints, and chose this mode of ridding themselves of the burthen of life, in preference to other modes of suicide so prevalent with the lower orders under similar circumstances" (p. 324).

At Juggernaut, as in the worship of Egypt and Phœnicia, human blood used to flow freely, and the mutilated corpses of those who accepted a fate so terrible were ruthlessly trampled under foot by the crowd,—all believing that the dead were glorified by the very sanctity of the ground on which they fell.*

Now, I believe, no such thing happens, overtly, in any part of India, the Government having
 Such sacrifice no longer humanely opposed and prohibited murderous rites of all kinds. If
 occurs. suttee, infanticide, ghaut murders, or sanguinary offerings to
 Shiva or Kali ever occur (which doubtless is sometimes still the case), they are performed clandestinely by those who are perfectly aware of the illegality of such atrocious practices. Although, however, the immolation of human beings beneath the car of Juggernaut no longer occurs, there are numerous general circumstances connected with the place, the mode and the season of pilgrimage, which prove very destructive to life. I shall revert to a special consideration of this subject.

The great temple of Juggernaut is accurately described by the Revd. A. F. Lacroix
 The temple of Juggernaut. in the *Calcutta Christian Observer* for September, 1849. The
 following are his remarks regarding the *Burra Deo*, the *Mookh-sála*, the *Bhóg Mundub*, the *Jugmohun*, &c. :—

“The temple stands in the centre of Pooree, within an enclosure measuring 620 feet by 600 feet, and surrounded by a stone wall 20 feet high. On each side of the enclosure is an entrance; the most celebrated of which is the gate on the east side, opening into the Boro Dándó; it is flanked by colossal figures of lions, and thence called “Singh Dwár,” or Lion-gate. In front of this gate, in the centre of the road, stands a beautiful fluted column of black basalt, about 40 feet high. Most strange to say, it is of Grecian architecture, and was brought to its present site some years ago, from the Black Pagoda at Kanarok. A small figure of Honuman is placed at the top. Within the sacred area are more than 50 temples dedicated to the principal deities of the Hindoo Pantheon. But the most conspicuous building is a lofty stone tower, 200 feet high and 42 feet square, called the Boro Dewál, or Great Temple; within it is a large platform, made of marble, and called the Rotnosinghásón, or “Throne of Jewels,” on which the images of Jogonnáth, his brother and sister, continually stand. Two large pyramidal buildings, called the Mukhsálá and Bhóg Mondop, with a smaller one between them called the Jogomóhon, complete the temple. In the Bhóg Mondob is daily placed the sacred food intended for pilgrims; in the Jogomóhon, “the delight of the world,” the dancing girls amuse the idol and his priests. The roof and sides of the temple are ornamented with various sculptures representing elephants, griffins, and other huge monsters. On the inside of the temple wall also are many figures of the grossest kind; indeed, all the temples of Orissa, great and small, are distinguished above all the other temples of Hindoostán for the obscenity sculptured on them. No European, however high his rank, can enter into the temple-area; the place would be polluted, say the priests, by his very touch.”

* References, tracing the similarities existing between the worship of the ancient Egyptians and the people of Hindoostan, are to be found in Laurie, *Op. Cit.*, p. 46; in Heeren's “Historical Researches,” Vol. III, Chap. I.; and in Volney's “Ruin of Empires” (“Les Ruines”), pp. 245, 259, 260-61, 274, 277, 280, 297, 356, 360, 378, and 390.

The temple establishment.

The establishment of the temple is thus described by the same author (*Op. cit.*, p. 393):—

“ The *establishment* connected with the temple of Jogonnáth is immense: it includes thirty-six different kinds of offices, some of which are subdivided into several more: about 640 persons are required to fill up all the appointments, of whom a few may be mentioned. There is the *khátsúj mecáp* who takes Jogonnáth his bed, the *pasupálok* who wakes him, and the *mukh prokhyálok poríari* who gives him water and a tooth-pick to wash his face and mouth; there is the *painter* to paint his eyes, an officer to give him rice, and another to give him pán; there is a *dhua* to wash his linen, the *changra* to count his robes, the *chhattarua* to carry his umbrella, and the *khuntia* to tell him the hours of worship. Besides all these there are 400 families of *suars* or cooks, and 120 dancing girls. The priests number in all about 3,000, who also have different grades of employment, and many of whom are exceedingly rich. Two classes may be specially named—the *Purháris*, who perform their ternal service of the temple, and present the pilgrims to the idol; and the *Pándás* or pilgrim-hunters, who are employed by the former to entice worshippers to Pooree: by the pilgrims all the priests are called Pándás indiscriminately.”

The crowd assembled in front of the cars is composed of many thousands of individuals.

The number of pilgrims assembled at Juggernaut in different years.

This year, from all I could learn, and from my own impression, I should say that about 50,000 pilgrims were present at the *Ruth Jatra*. Besides these, there is the fixed population of Pooree, which is probably from 25,000 to 30,000 souls.

On the whole, I believe that the average number of pilgrims annually repairing to Juggernaut is certainly decreasing. In 1849, the European Missionaries present at Pooree, during the Car Festival, computed that in all 150,000 pilgrims had been present. (Sutton, p. 122).

In July, 1825, during the same festival, it was stated that the number of pilgrims was 225,000. (*Vide* “India’s Cries to British Humanity,” by J. Peggs, late Missionary at Cuttack. Lond., 1830, p. 221).

The following Return of pilgrims at Juggernaut, in different years, is extracted from Stirling:—

1817-18	..	..	..	75,641
1818-19	..	..	..	41,111
1819-20	..	..	..	131,874
1820-21	..	..	..	33,446
1821-22	..	..	..	52,160

This statement represents the number of “ pilgrims of all classes who attended, during the years noted, at the three great festivals.”

The following table is given by Mr. Raban (in his letter, regarding Pooree, to the Commissioner of Cuttack, No. 931, dated 19th February, 1868). It shows the number of pilgrims *actually taxed* at Pooree during the years for which statistics have been collected :—

Year.	Number of Pilgrims who paid Tax.	Year.	Number of Pilgrims who paid Tax.
1816-17 ..	28,849	1827-28 ..	36,397
1817-18 ..	33,774	1828-29 ..	60,041
1818-19 ..	33,015	1829-30 ..	40,389
1819-20 ..	62,435	1830-31 ..	66,494
1820-21 ..	Missing.	1831-32 ..	21,243
1821-22 ..	42,662	1832-33 ..	28,012
1822-23 ..	85,802	1833-34 ..	28,579
1823-24 ..	29,123	1834-35 ..	35,314
1824-25 ..	31,101	1835-36 ..	37,909
1825-26 ..	98,723	1836-37 ..	27,681
1826-27 ..	31,265	1837-38 ..	29,334

The following figures show *the entire number* of pilgrims at Juggernaut during the years noted—not merely those who were taxed. This table was obtained for me, whilst I was at Pooree, from the old Government records there :—

1816	69,636
1818	66,605
1819	75,876
1820	106,674
1821	85,726
1822	104,688
1823	128,976
1824	71,702
1825	72,729
1826	164,861
1827	76,719
1828	91,131
1829	121,422

The Baptist Missionaries of Orissa, in their Report published in 1858, state that “hundreds of thousands” of pilgrims are annually brought to the shrine by the emissaries from the temple. This can scarcely be said to hold good now.

In their Report for 1864-65, they state that the festival for 1864 commenced on the 6th July, and that “the attendance was comparatively small, probably not more than 40,000 persons were present (inclusive of the Pooree people) when the idols were placed on the cars.” They add—“The whole affair passed off very quietly. There were very few cases of cholera, and not a single accident occurred to our knowledge.”

In the Baptist Mission Report for 1865-66 (p. 23), it is stated that 45,000 Hindoos were present at the Car Festival of 1865, of whom more than 31,000 were Bengalees. The women, it is said, were then in the proportion of 40 to 1 man. The deaths among the pilgrims were returned at 1,372; whilst the reporter of these statements adds—"How many perished on their way home, weary, worn, and heart-sick, who can tell!"

Regarding the year 1866, we learn (from the Orissa Mission Report for 1866-67, p. 26) that at the Car Festival "there was hardly a single pilgrim present. It was at one time considered impossible, from the small number of people present, to drag the cars to their destination. The priests and Pandahs seemed quite disheartened," &c. It will be remembered that this was the year of terrible famine in Orissa, to which I shall have again to allude.

In 1867, the Reverend Mr. Goadby was at Pooree during the *Ruth Jatra*. He wrote of it as follows:—"Eight years have elapsed since my last visit, and from whatever cause the decrease in the number of pilgrims resulted, in my own mind I could not but look upon it as a hopeful sign." (Report, 1867-68, p. 24).

I think there can be but very little doubt that the annual attendance generally at Pooree has much fallen off of late years. It is probable that 50,000 is quite equal to the present average. In former times it was much higher.

In 1804 and 1805 the English Government levied no pilgrim tax; the attendance of pilgrims was very great, and the loss of life was very considerable. (*Vide* Pegg's *Op. Cit.*, p. 291).

In 1821 the assemblage of pilgrims was a small one. Indeed, the Brahmins then threatened, in consequence, to remove the worship of Juggernaut to some more central situation in India. That year was one of great sickness and mortality.

It is perhaps fortunate that the scene of the worship has not been removed. Pooree, dirty and overcrowded as it is, has certain advantages. Its very out-of-the-way position may, in a sense, be regarded as one of these. Again, it is on the sea-shore, and ocean breezes blow over, if not through it.

Everything about the ceremony of the *Ruth Jatra* betokens the fact that its former *éclat* and grandeur are falling off. Not only is the worship of

The number of pilgrims is, on the whole, probably diminishing, and the ceremony seems, to a certain degree, to be losing its hold on the people.

such a nature as the history of all nations has taught us must die out and decay, but less eagerness is evidenced on the part of the so-called pilgrim-hunters now than in former years to bring together vast crowds of devotees; and the pilgrims themselves are perhaps beginning at last to discover that *Shree Jeo* is a god whose worship entails incalculable misery rather than happiness. The history of Juggernaut is a terrible story of disease and death. Government being now in no way associated with the shrine, it is to be hoped that it may, as has been predicted of it, "sink with its own weight." There is no doubt that even now the shadow of decadence rests upon it. It is doomed to yield before an advancing civilization. Meanwhile, however, as might be

expected, where modern education is most opposed, there idolatry is most fondly cherished. The one will in time be expelled by the other. Peggs happily alludes to the idol-car as "a tottering ark." It is so in more senses than one.

The chief ear is 45 feet in height; it has 16 wheels, each 7 feet in diameter; and the platform around it is 35 feet square. The other two ears (*ruths*) are of somewhat smaller dimensions. (*Vide* "History of Púrí," p. 39, by Baboo Brij Kishore Ghose, Head Clerk, Cuttack, 1848).

The cars.

These ears are of an irregularly conical form, being constructed entirely of wood. They are decorated with small flags and with long strips of parti-colored cloth, spangled with commonplace filigree. These strips hang vertically from the apex of the ear down its sides. The general effect appeared to me tawdry and contemptible. In former days, when the British Government supplied the cloth, it was of a more splendid character. The deterioration that has occurred in this respect is but one of many proofs that money is no longer lavished on the ear of Juggernaut as obtained in former years. Its grandeur is a thing of the past; and the general concomitants of the festivals at Pooree are, from all I can learn, becoming gradually less imposing and more shabby.

In the front of the ear is a somewhat open space, immediately behind which is placed the idol, five feet in height—also surrounded with parti-colored cloths.

The face of Juggernaut is black; the eyeballs disproportionately large, represented by patches of white paint; the pupils are round and black; the nose is a pointed snout; the mouth a streak of red paint, curved upwards at the angles; there is no chin; and on the forehead is a tiara of diamonds,—it is said of great value. From each side of the head, at an angle, projects what is supposed to be an arm; but there is no hand. The whole figure is, indeed, a terrible object; terrible in its innate hideousness,—yet more terrible in its connection with all the surrounding circumstances.

The idol of Juggernaut.

The human mind can scarcely sink lower than it has done in connection with the appalling degradation of idol-worship at Pooree. It is doubtful if Fetichism has ever pointed to a blacker grave into which should sink the hopes, the fears, and the aspirations of man. The only possible form of worship which is yet more degrading is that savagery which demands offerings of human blood; and this itself was also a part of the ceremony at Pooree, until it was authoritatively abolished by the rulers of the land, as outraging every principle of justice and humanity. The only remedy for all this is time, and the instruction of the people, who are at present enslaved by priestcraft, steeped in idolatry, determinedly tenacious of caste, bewildered by frivolous superstitions and legendary fables, strongly prejudiced against education, and content to look forward to their periodically recurring festivals, at which they are despoiled of all that they possess;—a simple people whose delight is in a grotesque traditional mythology; whose faith is blind and unquestioning; whose religion is, to no inconsiderable degree, the terrorism resulting from sophistical inventions; whose gods are the sun, the moon, the stars, fire, rivers, monkeys, cows, birds, fishes, reptiles, and stones.

The worship of Juggernaut.

The pilgrim crowd is, on the whole, very orderly and well-behaved, and the general demean-

The pilgrim crowd is well-behaved. our of the people is dignified and decorous. Most of those present have gone through much quiet endurance, and, like soldiers after a battle, there is a certain look of austere determination about them. The old village Hindoo, of tall and commanding figure, his fine countenance somewhat wrinkled, his forehead bearing the brahminical mark, his hair sprinkled with grey, as he stands, staff in hand, gazing at the religious pageant before him, is a picture worthy of an artist's study. The women in the crowd are not less interesting. Ugly they may be, and certainly are in many cases : their forms attenuated, and their general appearance that of toil-worn creatures ; but withal, as they appear in dense throng, there is something strangely interesting about them. The further they have come, and the more they may be weakened by toil and hardship, so much the more eager and enthusiastic are they. As one glances around at the crowd, devotees are still observed arriving on the scene, with looks of wonder and delight, not unmingled with awe, as they approach the goal and object of their expedition. At last they are rewarded for all their patience, toil, fatigue, and misery. Others are already preparing to leave, and they may be seen trooping out of the place, carrying with them, in their simplicity, endearing mementos and, to them, holy relics of Pooree, very much as the Christian Crusaders of old took back with them silks and precious stones and the wine of Gaza. Almost every pilgrim carries either on the head, or resting on one hip, a square wicker basket full of holy food (*moha-persad*), which will ultimately be distributed amongst friends at home. As they march along many may be heard reverently muttering " Hurree bol ! " " Hurree bol ! " They have now before them the terrible return-march homewards, with which, in but too many cases, will be associated experiences of disease, vicissitudes of season, overflowing of rivers, hunger, prostration, and death. Stout hearts might well quail with such trials in store for them. But the pilgrim, although he may be tired and in some respects down-hearted, yet feels that he has done right in visiting Juggernaut, let what will befall ; his conscience has received balm and consolation ; and as he starts, prepared for any fate, he takes a last fond look of the temple, as it is sharply defined against the evening sky, surmounted with the discus or *chukra* of Vishnoo, and with pennons and streamers fluttering to the breeze.

During the *Ruth Jatra* festival, those who come together are for the most part Bengalees,

Large proportion of Bengalee women in the crowd.

Some Punjabees had come from Hazara.

of whom a very large proportion are women. While I was passing along the crowd I observed a party of up-country men ; I spoke to them, and found that they were Punjabees who had just come down all the way from Hazara, some 2,000 miles. They told me they had been travelling between four and five months ; that they were going to stay a day or two at Juggernaut, and then at once return to their homes. Shakspeare's words were recalled to my mind—

" A true-hearted pilgrim does not fear
To measure kingdoms with his feeble steps."

In the crowd I observed a very large number of persons afflicted with elephantiasis of

Elephantiasis very prevalent amongst the people of Orissa.

one or both legs. I should think that within five minutes one could have counted at least a hundred cases. It occurs in both sexes, and, so far as I could learn, there are certain parts of India in which it is particularly localized. It

is a terrible and hideous deformity, the causes of which ought to be minutely enquired into. I believe that, by careful investigation, its predisposing, and probably its exciting causes could be determined. Many of those afflicted with it have an ex-sanguine countenance. It seems very desirable that all the collateral circumstances associated with this affection should be carefully sifted by the sanitarian. It is a matter of no insignificant importance. At this moment many thousands of persons in India are rendered miserable by the deformity. A native official of considerable position informed me that he had a specific for the fever complicating elephantiasis, but that he could not divulge the secret. He would only say that it consisted of the root of a certain plant which, to be efficacious, must be taken up during a solar or lunar eclipse, and carefully administered with a certain incantation or *muntra* which he had learnt from a *Byragee* ! I reminded him of the then approaching total eclipse in August, and told him he would have an excellent opportunity of accumulating his nostrum ; and probably, while our astronomers were engaged with their apparatus, my friend was gathering his secret remedy for elephantiasis. The natives generally associate the disease with rheumatism, but I am inclined to think that what they believe to be rheumatic fever is simply a symptomatic pyrexia, the indirect result of malaria, or, possibly, of certain idiosyncrasies in diet. The Ooriahs, for instance, always eat rice that has been cooked the day before. This habit may have no direct connexion with the disease elephantiasis ; yet the custom is a curious one, and it seems by no means improbable that the rice so kept may occasionally have passed into a state of acetous fermentation, the effects of which may be specific. Dr. Mouat has laid particular stress on this subject. Elephantiasis is an affection of the lymphatic system, frequently occurring in persons weakened by malarious influences. The disease—by the natives of Lower Bengal—is called “*Julodosh*,” (from *jul*, water—and *dosh*, fault) or simply *jul*. I find that in the Rajshahye District the fever attending the malady is recognized by the term “*Sanjore*.”

As a rule, the devotees do not stay long at Pooree on the occasion of the *Ruth* festival.

Dispersion of the pilgrims.

This year, upwards of 19,000 left the place within five days, as shown by the following figures, furnished to me by Mr. D. Lacey,

District Superintendent of Police :—

Memo. showing the number of pilgrims that left Pooree from the 25th to the 30th June, 1868.

25th June	...	...	...	...	...	9,613
26th „	...	...	...	...	...	2,448
27th „	...	...	...	...	...	2,792
28th „	...	...	...	...	...	1,740
29th „	...	...	...	...	...	1,467
30th „	...	...	...	...	...	1,149

19,209

The statistics of cholera at Pooree in former years are far from being satisfactory. The last two or three epidemics have been more carefully observed.

The following Table, compiled by Baboo Oodoy Chand Dutt, Civil Medical Officer of Pooree, exhibits, with approximate accuracy, the prevalence of the disease, month by month, from the beginning of 1842 to the middle of 1868:—

YEARS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
1842	36	5	47	1	..	1	7	1	..	..	6	2	106
1843	7	..	35	..	..	164	25	..	..	..	2	1	234
1844	..	3	..	..	2	200	..	..	..	1	..	..	206
1845	1	2	3	1	..	2	57	2	..	1	..	..	69
1846	2	..	14	1	..	72	1	..	1	3	4	1	99
1847	..	1	14	..	1	4	29	1	..	..	1	..	51
1848	1	5	3	3	..	2	47	..	..	..	..	..	61
1849	..	..	..	..	1	107	4	1	..	..	1	..	114
1850	1	37	11	1	..	..	2	..	..	..	5	1	58
1851	..	..	1	..	2	39	28	..	..	..	..	..	70
1852	..	5	4	..	..	104	2	1	..	1	3	3	123
1853	2	2	10	1	1	6	26	2	1	..	..	..	51
1854	..	6	48	..	..	129	18	..	..	1	7	1	210
1855	..	2	1	..	2	..	156	3	..	..	2	1	167
1856	1	3	2	..	..	..	..	..	1	2	1	..	10
1857	..	8	43	11	1	66	2	..	..	..	4	..	135
1858	..	2	3	1	1	1	9	..	..	..	..	..	17
1859	..	7	8	..	..	..	47	..	..	..	9	..	71
1860	1	8	19	1	2	96	4	..	..	1	..	..	132
1861	..	..	12	3	..	3	27	..	..	4	..	1	50
1862	2	5	6	..	..	91	20	..	..	1	3	..	128
1863	..	..	1	..	1	93	2	..	..	..	..	2	99
1864	1	3	..	1	..	1	12	1	..	..	4	..	23
1865	..	1	2	2	1	74	13	..	2	..	..	..	95
1866	1	22	26	1	..	..	..	1	..	..	1	..	52
1867	..	..	1	..	..	..	..	..	..	38	114	..	153
1868	..	1	8	2	..	56	..	..	..	..	..	..	67
Total ..	56	128	322	30	15	1,311	538	13	5	53	167	13	2,651

By this record, only 2,651 cases of cholera were treated at Pooree in 26½ years, which is probably very far below the truth.

The different years, illustrating a greater or less prevalence of the disease, and the aggregate mortality of each month, would thus appear in the following order :—

1843 234	1859 71	
1854 210	1851 70	June 1,311
1844 206	1845 69	July 538
1855 167	1868 67	March 322
1867 153	1848 61	November 167
1857 135	1850 58	February 128
1860 132	1866 52	January 56
1862 128	1847 51	October 53
1852 123	1853 51	April 30
1849 114	1861 50	May 15
1842 106	1864 23	August 13
1846 99	1858 17	December 13
1853 99	1856 10	September 5
1865 95		

Dr. Mouat considers the above record “an extremely imperfect one, affording little real indication of the severity and extent of cholera during the years mentioned. For example,” he writes, “in 1856, there are only ten admissions, whereas in that year cholera existed in great intensity among the pilgrims along the whole line of road to Pooree. I myself counted a larger number of dead at the roadside near Bhudruck and from that place to Cuttack.”

The months presenting the greatest mortality are June and July. It is at this period of the year that the *Snan* and *Ruth Jattras* occur. Next comes March, the time for the *Dole Jatra*; and then November, the month when the *Punchuck* festival terminates.*

In January, the *Mukker Sunkrant* takes place; during the remaining periods of the year (excepting, perhaps, one-half of October) only minor festivals occur.

Thus, although the statistics given are of little value as regards their absolute accuracy, yet they show, what might *a priori* be expected, rates of mortality higher or lower according to the seasons during which a large or comparatively small number of pilgrims are congregated at Pooree.

It will be observed that an unusual mortality (for the said months) is recorded during October and November, 1867. This was at the time of the *Punchuck*.

* The chief festivals are thus alluded to by Laeroix (*Op. Cit.*, p. 396):—

“There are twelve principal festivals observed at Puri, of which the chief are the *Dól*, the *Chondon*, the *Snan*, and the *Roth Jattras*, each of which is attended by immense crowds of pilgrims. At all the principal festivals the idol Jogonnáth is dressed up to represent the god who is therein worshipped. At the *Snan Játtra* the three images are brought out to an elevated terrace within the temple enclosure, yet exposed to view from the outside, and there bathed by the priests: it being thought that, gods though they be, they have contracted no small degree of pollution, during the year, by being looked on and touched by so many sinners. The most celebrated festival of all is the *Roth Játtra*, or *car* festival, when the idols make an excursion to the temple of Gondieha, situated at the distance of two miles, at the north end of the Boro Dándo or broad road. The *car* festival always commences on the second day of the Bengálí moon of Asár, which falls between the 13th of June and 14th of July, and which, therefore, happens at the time of the greatest heat, and the setting in of the rains.”

It is probable that more attention was paid to the careful registration of deaths in 1867 than during previous years. The notice of the civil authorities had been specially drawn to the subject by the Government.

Imperfect as the above tables are (and, without doubt, they afford but a very poor idea of the truth), it will be seen from them that, during the past $26\frac{1}{2}$ years, cholera has scarcely ever been absent from Pooree; whilst, as a rule, it has prevailed with the greatest intensity at fixed times,—which favouring periods unfortunately coincide with the celebration of the most crowded festivals. From the Tables, June and July (the seasons of the *Dole* and *Ruth Jatras*) furnish a mortality considerably more than double that which occurred during all the other months put together.

Cholera appeared at Pooree in February, 1866, at the time of the *Dole Jatra*. Cholera in 1866. It continued till the end of March, and again re-appeared in August and September, during which months, an unusual amount of rain having fallen, half the district was inundated. Those who were at the time famine-stricken chiefly suffered. The greatest mortality occurred in the Unnochutter within the town, and in the temporary hospital near it; 29 deaths also occurred in the pilgrim hospital, and 11 in the Jail. When the heavy rains ceased in September, the outbreak of cholera passed off. I have taken these facts from notes supplied to me by Baboo Oodoy Chand Dutt, who was in medical charge of Pooree at the time, and who, during the period of the last famine in Orissa, wrote several interesting reports of the then sad condition of the people in that province.

During the three last months of the year 1866, in addition to cholera, small-pox prevailed severely. In the District and town of Pooree, from Prevalence of small-pox in 1866. July to December, 11,350 cases were reported by the Police, with 3,627 deaths.

The utmost virulence of the epidemic was during the time noted, but it also prevailed for two or three months previously. It disappeared entirely at the end of January, 1867.

From the close of the epidemic in August and September, 1866, (which, as has been noted above, chiefly affected the poverty-stricken *Kungalees*,) Cholera at Pooree in 1867. almost no cholera was seen at Pooree until the month of October, 1867. There had been a distinct and exceptional lull. It is to be observed that during 1866-67 (in consequence of the famine, and of Government notification warning devotees away from Juggernaut for the time being) pilgrimage was conducted on an unusually limited scale.

A severe epidemic prevailed at Pooree during the months of October and November, 1867. An influx of pilgrims commenced at the Poornomee or full moon gathering, on the 13th October; the lunar month coming between one full moon and another is at this season considered a very auspicious time by the pilgrims. During the last five days of this period the Punchuck Jatra is celebrated. The native month Kartick, corresponding to our October and November, marked the period of the outbreak now alluded to.

“The greater number of the pilgrims,” writes Baboo Oodoy Chand Dutt, “came from the Gurjat Mehals and the Sumbulpore District; a considerable number came from Behar and Central India, and a small proportion from Bengal and the North-Western Provinces.” Mr. Raban observed that, during the last few days, there was a great influx of Ooriahs from the hill tracts subject to the Government of Madras. Pilgrims began to arrive at Pooree on the 13th October. Some cases of cholera had occurred in July and August at Bhobanessur, distant 25 miles from Pooree. On the 23rd September one case occurred at Piplee, on the Cuttack road, 16 miles from Pooree, in the person of a pilgrim returning from that place.

On the 11th October two cases occurred, a few miles from Pooree, in the person of pilgrims leaving that place.

On the 18th October one man died of cholera, on his way from Cuttack to Pooree, and on the same day a woman, also proceeding thither, died within 8 miles of Pooree. *On the 19th October* the disease first appeared at Pooree in the person of “a female pilgrim named Sattock, resident of a village called Saro, in the Sumbulpore District,” who was picked up on the road in a state of collapse. “She stated that she caught the disease on the way, and was deserted by her companions on arriving at Pooree.” On the same day another case also proved fatal in the town (a female Gurjat pilgrim). From the 19th to the 23rd October no cases were reported. It ought to be noted that, on the 18th and 19th instants, 7·5 inches of rain had suddenly fallen. On the 23rd October ten deaths occurred. Now the disease began to spread. From this date to 18th November, inclusive, 279 cases occurred in the town, with 94 deaths. This was exclusive of 117 cases admitted into the pilgrim hospital, of which 97 proved fatal; *i.e.*, there were in all 396 cases, with 191 deaths. Of the 279 individuals seized, 261 were pilgrims, 15 residents of Pooree, and 3 paupers.

During the period of the epidemic, we learn that the daily number of pilgrims probably did not fall below 5,000; whilst from the 8th to the 12th November, the time of the *Punchuck Jatra*, the number increased to 15,000. As the pilgrims passed, on their homeward route, along the Cuttack and other roads, deaths continued to be reported amongst them.

Mr. Raban seems to think that the disease first occurred at Pooree, and it does certainly appear to have been absent from that place until the pilgrims assembled there. But from all that has been written by Baboo Oodoy Chand Dutt, and by Dr. Stewart, then Civil Surgeon of Cuttack, it appears to me probable that the first cases occurred amongst pilgrims actually *on their way to Pooree*, before the disease had shown itself there.

The next appearance of cholera, in an epidemic form, at Pooree, occurred on the occasion of the *Dole Jatra* festival, in February and March, 1868. I am indebted to Baboo Oodoy Chand Dutt for the following note on the subject :—

“The *Dole Jatra* took place on the 8th March, after which date the pilgrims commenced to return. Most of those that came to Pooree on this occasion were natives of Behar or of the

North-West Provinces. They arrived in batches ; some a month, others from one to three weeks before the day of the festival (8th March). No information regarding the previous existence of cholera in the homes of the pilgrims was obtained, nor were any cases known to have occurred on the road between Cuttack and Pooree previous to the assembling of the pilgrims. There was no cholera in the town of Pooree at the time when this festival commenced. The date of its last known occurrence was the 23rd November, 1867. The disease first appeared on the 22nd February, or about a week after a considerable number of pilgrims had come in. There was nothing peculiar in the weather, except that, as usual, it was getting hotter every day than during the early part of the month. There had been no rain-fall, nor any other special meteorological phenomena worthy of remark. The numbers estimated to have assembled on the 8th March were 10,000 pilgrims. The number of deaths reported by the Police to have occurred in the town was 56. Ten patients were admitted into hospital ; of these, five were discharged cured, and five died. The epidemic was not a severe one. The dispersion of the pilgrims commenced whilst the disease still existed amongst them.

*“ Notes of the first few cases.—*The Police reported that two pilgrims, who had come to Pooree on the 21st February from a place called Tesan Kolian, near Cuttack, were attacked with cholera the same day, and died on the following day. No further information of any importance could be obtained concerning these cases. The next case of cholera occurred on the 26th February, in the person of a pauper of the town, who was admitted into hospital on the 28th, and subsequently discharged, cured. On the 1st of March another pauper was admitted into hospital. On the 3rd March two cases occurred among pilgrims, and from this date cases occurred daily till the epidemic declined.

“The epidemic alluded to ceased, in Pooree, by the first week of March. During the month, eleven deaths from cholera were reported along the Cuttack road. During April, 106 deaths were reported in the Cuttack District, during which time 6,569 pilgrims were reported as having passed through it, to and from Pooree.”

The next epidemic outbreak at Pooree occurred at the end of May, or rather in the beginning of June. In my Annual Sanitary Report, I shall
(b) During the *Ruth Jatra*. enter more fully into the history of this visitation ; at present, I content myself with the following short, but clear, memorandum on the subject, also by Baboo Oodoy Chand :—

“NOTE ON THE EPIDEMIC CHOLERA THAT PREVAILED AT POOREE
DURING THE RUTH JATRA FESTIVAL IN JUNE, 1868.

“The pilgrims commenced to assemble here from about the 25th May. Some had come before this, but their number was insignificant. They were for the most part Bengalee women. On close enquiry among the first few cases of cholera, it did not appear that the patients had seen or heard of the disease either on the road or at their homes. It could scarcely be said to have disappeared from Pooree since the outbreak in February and March, on the occasion of the *Dole Jatra*. The last case reported to have occurred in Pooree, since the

March epidemic, occurred on the 26th April. The date of the first appearance of the disease in the later epidemic was the 29th May. So that, supposing the reports to be correct, and that no other cases actually occurred in the interval, cholera can be said to have disappeared only for a month and two days. The first appearance of the disease may be said to have taken place four or five days after the gathering had commenced. The party of pilgrims, among whom the first case occurred, had been here nine days, when one of them got ill. Since the first case occurred on the 29th May, no others were met with till the 7th June. From this date there were cases every day. The epidemic, therefore, must be said to have broken out on the 7th June. The weather on the 29th May was a degree hotter than on previous days. In other respects there was nothing peculiar regarding it.

"The 7th of June was a rainy day, with the maximum thermometer reading at 88°, or several degrees lower than the average for the month. There was also a very strong wind blowing constantly on this date. The numbers stated to have assembled during this festival were 50,000 pilgrims. The number of deaths up to date is about 150. The dispersion of the pilgrims commenced during the existence of the epidemic.

"*Notes on the first few cases.*—The first case occurred in the person of a Bengalee woman, over 50 years of age, a native of Hallisahur, in Bengal. She had come to Pooree nine days before her illness, and was attacked on the night of the 28th May. She died the next day at 10 A.M. This case occurred in a house near Naga Mutt, in Hurehandee Sahee.

"The second case also occurred in the person of a Bengalee female, aged 22, who had been in Pooree for eleven days. She had taken lodgings in a clean brick-built house, opposite Saith-gunga, in Balleesayee. The third case occurred in the same house as the second. Both cases occurred on the night of the 6th June. The fourth and fifth cases occurred in the persons of two brothers, residents of the town, and shop-keepers by profession. They occupied a house very near to the one where the second and third cases occurred. The sixth case was also in the same quarter, on the 7th instant. On the 8th June there were three cases in the same part of the town as the first six cases. From this date there were cases every day, and the epidemic spread to those parts of the town which are occupied by pilgrims."

From the Police Records, I found that in the Pooree District, from 26th November 1867 to 26th June 1868, there were reported 339 seizures from cholera, with 317 deaths; and in the town of Pooree itself, from 22nd February to 1st July 1868, 219 seizures, with 206 deaths.

Somewhat of the same information is embodied in the following memorandum, which I find in my Diary:—"In the whole of the Pooree District, from 7th June to 1st July, there were reported 292 attacks of cholera, with 252 deaths; of these, 163 occurred in Pooree itself.

"In and about Cuttaek, from 29th June to 6th July, 25 deaths from cholera were reported."

In the "Report of the Commissioners appointed to enquire into the Famine in Bengal and Orissa in 1866," it is noted that the probable average rainfall for the year at Pooree is about 60 to 65 inches.

Rain-fall. The fall for 1864 was 41·8, for 1865 only 36·3, and for 1867 it was 77·2.

The average rain-fall in inches for seven months of the 13 years preceeding 1865 is thus quoted by the Famine Commissioners :—

May	..	..	..	2·1	inches.
June	..	..	..	9·2	„
July	..	..	..	12·2	„
August	..	..	..	17·3	„
September	..	..	..	16·8	„
October	..	..	..	9·4	„
November	..	..	..	1·8	„

Baboo Oodoy Chund Dutt gives the average for the 11 years preceeding 1868, thus :—

January	..	..	..	1·1	inches.
February	..	..	..	2·12	„
March	..	..	..	0·57	„
April	..	..	..	3·21	„
May	..	..	..	2·46	„
June	..	..	..	7·94	„
July	..	..	..	8·27	„
August	..	..	..	21·56	„
September	..	..	..	13·44	„
October	..	..	..	10·42	„
November	..	..	..	2·9	„
December	..	..	..	0·31	„

It will be observed that considerable differences appear in these two sets of statistics.

The rain-fall for 1865, 1866, and 1867 is tabulated below ; the figures for the first of these years I have taken from the Famine Report, those for the two later years from the Annual Reports of Pooree by the Civil Medical Officer in charge.

The Rain-fall at Pooree in different months for 1865-66-67.

				1865.	1866.	1867.
January	...	...	...	.....	.....	.....
February	...	...	...	.....	3·9	.....
March	...	...	...	.....	.....	.....
April	...	...	...	.....	6·0	4·20
May	...	...	...	13·0	2·6	4·60
June	...	...	...	5·6	6·2	8·2
July	...	...	...	4·3	6·7	13·4
August	...	...	...	5·6	28·6	14·7
September	...	...	...	5·2	12·1	10·6
October	...	...	...	.....	11·1	14·3
November	...	...	...	.....	.....	4·5
December	...	...	...	.....	.....	.....
Total	...	...	...	33·7	77·2	74·5

It is instructive to note the variations in the last Table. The Famine Commissioners make the following remarks on the rain-fall of 1865 :—

“It will be seen that while there was a wholly abnormal, and comparatively useless fall of 13 inches in May, the total registered fall of the usual rain months, June to September, is 20·7 inches, or an average of about 5 inches per mensem. This seems alone enough to cause an extreme failure in a hot rice country, even without looking to the subsequent entire absence of rain in October; and accordingly we find that, in September, before there was any alarm whatever in the country generally, the Pooree rate is given at what may in fact be said to have been (in Orissa) already a famine price, *viz.*, 13 $\frac{3}{4}$ Calcutta seers per rupee.”

It will be observed how widely different in character was the rain-fall of the two following years. Not only was there much more of it, but it was greatly more seasonable in its occurrence.

Temperature.—The average temperature of former years, and of 1867, is thus tabulated by Baboo Oodoy Chund Dutt :—

MONTHS.	For the past eleven years.	For the year 1867.
January	74·81	73·78
February	76·80	78·54
March	81·93	82·11
April	84·2	84·35
May	86·44	86·48
June	85·66	85·80
July	84·89	85·30
August	83·74	84·76
September	84·27	85·93
October	82·70	83·69
November	77·77	78·19
December	71·76	73·93

The rain-fall and temperature of May and June of the present year are shown below :—

1868.	Rain-fall.	Mean Maximum.	Mean Minimum.
May	5·4	91·35	73·54
June	11·0	89·63	77·56

By the census of 1837 (at the time of settlement) the population of the Pooree District was set down at 500,963, of whom about 6,000 were Mahomedans and the rest Hindoos; there being 23,000 women and 270,933 men.

Population of the Pooree District, and of Orissa generally.

By a rough census made by the Police in 1854-55, the population was 613,536 souls.

Previous to the famine of 1866 it was returned as 754,701. Of these, no less than 175,955 died from famine, and 3,798 of diseases dependent on famine. It was reported by Mr. Raban, Magistrate of the District, that, excluding the town of Pooree, 213,944 inhabitants of the District were ascertained by their neighbours to have died between October 1865 and January 1867; giving an average death-rate of 28·36 per cent. among the population of the whole district, exclusive of the town of Pooree. Taking the average of different pergunnahs, the mortality varied from 52·97 per cent. in Santapparrah, which is between the Chilka Lake and the sea, to 4·49 in the zillah of Huldiah, near Khoordah.

The total population of the three districts of Orissa (Pooree, Cuttack, and Balasore), before the famine, was probably about three millions; of whom, probably, nearly *a million* died of famine and its immediate results.

On this point, Mr. Ravenshaw, the Commissioner of the Cuttack Division, submitted the following statistics :—

“Total population of the three districts before the famine, 3,015,826. Of these, 809,561 souls perished, and 115,028 either emigrated or disappeared;—making a total loss of population of 929,497, and leaving 2,086,329 surviving inhabitants. The percentage of deaths to population equals 27·43, which, added to 3·91, the percentage of emigrated or missing, gives a general percentage of 31·34.”

The area of the Pooree District is equal to 2,697 square miles, that of Cuttack equals 3,062, and of Balasore 1,890; giving a total of 7,649 square miles;—the area of the Tributary Mehals, to the westward, being 15,000 square miles.

The extent of the Pooree District, and of Orissa generally.

Stirling, in his description of Orissa proper—the original country of the *Uria*, *Or*, or *Odra* nation (hence called *Or Desa* or *Oresa*)—considers it under three natural divisions or regions, which are topographically and climatically very different from each other. The first is the marshy woodland tract extending along the coast of the Bay of Bengal, varying in breadth from five to twenty miles; second, “the plain and open country known as the *Mogulbundi* (or *Khaliseh* land) between this and the hills,” varying in breadth from ten to fifty miles; third, the hill country itself, lying to the west.

General topography and botany of Orissa.

The first of these regions is a dreary, swampy, marshy, and jungly tract, very malarious and unhealthy. Its vegetation is thus pictured by Stirling :—“The surface of the whole is

covered with coarse, reedy grass and brushwood. One meets also with much of the *jhao* or *Tamarix Indica*, interspersed with quantities of stunted dwarf-palm called *hintal* (*Phoenix paludosa*). Generally where pure sand appears, more especially to the southward, about the Black Pagoda, the surface of it is covered with a thick net-work, formed by the interlaced stalks of a creeping convolvulus, with bilobate succulent leaves, which are for half the year loaded with large gay-looking flowers of a bright reddish purple. The natives call it *kynsarilatá*. A delicate succulent plant, with small bright green leaves growing thickly together (Class *Tetrandria*, Order *Monogynia*), is also very common; and the summits of the sand-hills are for the most part crowned with tufts of the *Asclepias gigantea*, and a stiff, thorny gramineous plant known by the name of the *goru kanta*."

The *kynesariluttee*, above alluded to, is, I believe, the *Ipomœa pes capræ*; the "delicate succulent plant with small bright green leaves," the *Hydrophylax maritima*; whilst the *goru kanta* is a *Spinifex*.

The Mogulbundi. The Mogulbundi is the second region alluded to by Stirling. Its soil is for the most part alluvial; it is a great rice country. Stirling's general description of its botany runs thus:—

"The surface of the Mogulbundi is, in most parts south of the Kans Bans,* embellished and diversified with fine shadowy groves of mangoes, dense thickets of bamboo, and the most magnificent banyan trees. The better cultivated gardens are loaded with jessamines, sambacks, marigolds, *bauhinias*, the *hibiscus*, *Rosa sinensis*, *Michelia champaca*, &c. About the huts of the natives we generally find in great quantities the *Hyperanthera morunga*,† *Melia azadirachta*‡ and *sempervirens*, *Æschynomene sesban* and *grandiflora*, the *Bombax heptaphyllum*,§ *Nauclea Orientalis*,|| &c., with the usual proportion of plantains."

Throughout the Mogulbundi the *Erind Gháj* or *Palma Christi* (*Ricinus communis*) is largely cultivated. The castor-oil is habitually employed by the Ooriyas for culinary purposes. Dr. J. J. Durant, formerly Civil Assistant-Surgeon of Pooree, in his letter No. 25, dated the 13th June, 1862, to Dr. F. Anderson, Deputy Inspector-General of Hospitals, (*vide* "Report of Civil Medical Officer on the Nature, Growth, and Preparation of the various Alimentary Articles consumed as Food by the Industrial and Laboring Population in the several Districts of Bengal, the North-Western Provinces, the Punjab, Oude, and British Burmah;" Calcutta, 1863, page 53,) thus alludes to the fact:—"It may appear singular that *castor-oil* should be taken as an article of diet from its known medicinal properties, but so it is; and from habitual use, the system seems to become quite accustomed to its effects, and it acts as a simple nutritive article of diet; as much as half a chittack, or an ounce, is commonly used at a time in one cooking, which serves for the family meal; from being mixed with chillies and other condimentary substances, it seems to lose much of its nauseous and disagreeable properties."

* A river near Balasore.

† The horse-raddish tree.

‡ The neem.

§ The silk cotton tree.

|| Vern., *kuddum*.

D. B. S.

Cotton, sugar-cane, and tobacco are grown in different parts of the Mogulbundi, chiefly to the southward. Almost every Ooriya smokes his home-made cheroot, and when the light goes out he usually carries it behind his right ear, or stuck in at his back, between his naked loins and the cloth (*dhotee*) covering that part of his body. The Ooriyas are essentially a tobacco-smoking people; the habit exactly suits their easy-going disposition.

In the central and southern parts of the Mogulbundi, writes Stirling (p. 172), “abundant crops of pulse, millet, and vegetable oils are raised during the cold weather, the chief of which are enumerated below:—

“*Múng*, or *Phascolus mungo*;* *mash kalai*,† or *Phaseolus radiatus*; *chenna*,‡ or *Lathyrus aphaca*; *khisari*, or *Lathyrus sativus*;§ *massúr*,|| or *Cicer lens*; *arkc*,¶ or *Cytisus cajan*; *kulthi*, or *Dolichos biflorus*; *berkúdi (beri)*, *Phaseolus max*; *bhút (Cicer arictinum)*; *kangni*,** or *Panicum Italicum*; *makúand jenar (Andropogon sorgum)*; *bajra*,†† (*Panicum spicatum*); *marúa (Eleusina corocana)*;‡‡ *til (Sesamum Orientale)*;§§ *sarisha*, or *Sinapis dichotoma*;||| and *phesi*¶¶ (*Linum usitatissimum*).”

The principal pot-herbs and chief garden produce of Orissa are noted by Stirling as the following:—

“*Kachu (Arum esculentum)*; *mula (Raphanus sativus)*; *karela (Cleome pentaphylla)*; *dhanya (Coriandrum sativum)*; *ajwain*** (Ligusticum ajwain)*; *metthi (Trigonella fœnum græcum)*; *phút††† (Cucumis momordica)*; *kankúr (Cucumis utilissimus)*;‡‡‡ *ben gomúga (Cucumis Madraspatana)*; *pita tarai (Tricosanthes lobata)*; *dhúndolo (Luffa pentandra)*; *kalam (Convolvulus reptans)*; *lal sáy (Amaranthus Gangeticus)*; *calra§§§ (Momordica muricata)*; *kala shima (Dolichos ensiformoides)*; *sorva (Anethum sorva)*,”|||| &c., &c.

All sorts of cucumbers, gourds, *kuddoos*, and *sáys* are plentiful; as is also the *bhindee (Hibiscus esculentus)*, the *baigun (Solanum melongena)*, the sweet potato, the red pepper (*lall mirrich*; Pers., *fil-fil gooruck—Capsicum annuum*), onions (*pccaj*; Pers., *khoom—Allium cepa*), and garlie (*Allium sativum*).

* English, green gram.

† Oordoo, *oorud*; Hind., *moong thikeree (Phaseolus Roxburghii)*.

‡ Common chick-pea; Pers., *nukhood gram*, the common food of horses in India (*Cicer arictinum*).

§ The *kasa mutter* of Upper India.

|| Eng., vetch; Pers., *ardus (Ervum lens* or *Vicia sativa)*.

¶ The *arkur* of Upper India. Eng., pigeon-pea (*Cajanus Indicus*).

** Pers., *gal*.

†† *Penicillaria spicata*.

‡‡ The *mundia* or *raggee* (Hind.)

§§ *Sesamum Indicum*, Linn.

||| One of the common species of mustard.

¶¶ Hind., *tesi*; common flax.

*** Lovage.

††† Beng., *phoontee*.

‡‡‡ Field cucumber; Hind., *kakrie*.

§§§ *Kakora*.

|||| *Anethum sowa* (Roxb.); Eng., dill or Bishop's weed.

In certain parts the safflower or bastard saffron (*Cathamus tinctoria*), the *pât*—Hind., *putwa*—(*Hibiscus cannabinus*), and *kasmira* or *sana*, i.e., jute (*Crotalaria juncea*) are found.

In the vicinity of the *Sásuns*, or Brahmin colonies (“held at light quit rent”), cultivation is carefully attended to. Stirling alludes to the fact thus:—

“It is in such situations only, and in the neighbourhood of some of the well-endowed temples, that the eye of the botanist is gratified by the presence of those graceful trees and plants which constitute the chief ornament of the Indian flora, such as *nagacesara* (*Mesua ferrea**), the *moulsari* (*Mimusops elengi*), the *Jonesia asoca*, the *Ochna squarrosa*, the *Sultan champa* or *Calophyllum inophyllum*,† the *jarool* (*Lagerstrœmia flos reginæ*), and the finer kinds of *ixora*, interspersed with *cocoa* and *arcca* nut‡ trees, and plantations of the betel-vine,§ turmeric,|| and ginger.”

The trees which in Orissa chiefly attracted my attention were the following:—The *chalta* (*Dillenia Indica*), the *punnang*, or Alexandrian laurel (*Calophyllum inophyllum*), already alluded to, the cashew-nut tree (*Anacardium occidentale*, Linn.), the Indian jack tree (*Artocarpus integrifolius*, Linn.), the cocoanut (*Cocos nucifera*), the *khagur* or date palm (*Pœhnia sylvestris*), the *imlé* or tamarind (*Tamarindus Indica*, Linn.), the *bel* (*Ægle marmelos*), the *peepul* (*Ficus religiosa*), and the *bur* (*Ficus Indica*). The mango (*Mangifera Indica*) and the plantain—*kela*—(*Musa paradisæica*) are also continually seen; the *pandanus* and *jatropha* everywhere abound; the *asclepias* attains unusual size and strength. The so-called exile’s tree, yellow oleander (*Thevesia nerriifolia*, Juss.) appears gracefully in the midst of the underwood by the roadside, and everywhere the soft bright flower of *Vinca rosea* attracts and pleases the eye of the traveller.

The third, or hilly tract of Orissa alluded to by Stirling, lies to the west of the Mogulbundi. The hills are, for the most part, irregular, sharp, and craggy,—their height varying from 300 to 2,000 feet above the sea; they form a picturesque boundary to the province. To the west of Balasore they are popularly known as the *Nelly Green* hills! the sailor’s corruption of *Nilgiri*, or blue mountains. I have no doubt that a good sanitarium might be selected on those hills; but at present they are entirely overgrown with vegetation and dense brushwood, and at most parts entirely inaccessible. I doubt not that a time will come when parts of those pretty hills will be resorted to by the Europeans of Orissa, in search of health. At present the adventurer in those parts is almost certain to be struck down with malarious fever. In the southern parts of this region lies the country of the aboriginal Khunds, Coles, and Sowers. Its botany is very interesting, and it produces a vast number of medicinal plants; but I must pass over this subject at present.

* The *nagaisa* or iron-wood tree of India.

† The *punnang* (Alexandrian laurel).

‡ (*Areca catechu*, Linn.) *sooparee*.

§ The pawn betel (*Piper betle*, Linn.)

|| *Huldee*; Oordoo, *chob*; Persian, *zurd* (*Circuma longa*).

The soil of the Mogulbundi is chiefly alluvial; the eastern tract is sandy, and intersected by numerous large rivers. To the north and west of Orissa, laterite and argillaceous clays appear. Beds of laterite extend almost throughout the entire length of the province. Beyond are the granitic rocks of Khondistan and Gondwana. Between the Chilka Lake and the sea lies a low, swampy, and sandy tract, intersected by numerous water-courses, and subject to inundations from the sea. This is a most unhealthy region, and here it was that the famine of 1866 first appeared, and was afterwards most severely felt. The inhabitants of this tract manufacture salt (*kurkuch*), by solar evaporation, from the waters of the Chilka Lake. They are known by the name of "*molunghees*."

The water of the wells at Pooree during the dry season is, perhaps, on an average, from 6 to 8 feet from the surface. During the rains it rises almost to the top of the wells.

In one of his reports, Baboo Oodoy Chund Dutt observes that in the hilly parts of the Pooree district the wells are from 24 to 30 feet in depth.

In those parts of the province which are subject to continual inundations, particularly of salt-water, and where jungle abounds and cultivation is rendered impossible, as might be expected, much disease prevails. But in those parts of the country which are drained and cultivated, the climate is mild and healthy. The influence of the south-west monsoon, during the hot months, as it blows steadily from the Bay of Bengal, is very delightful to those who live near the coast. Some persons have even gone the length of proposing that Pooree should be resorted to by invalids from Bengal during the dry hot months, and there is no doubt that a steady sea breeze is to be enjoyed there. But at that season of the year it is not always easy of approach, as my narrative proves. Again, the only house at present available there for visitors is the "*dák bungalow*." The station, so called, has a very dreary, dismantled look; and I am afraid that most invalids would there be subject to a feeling of considerable mental depression. Were more houses to be built, roads made, and sea-bathing establishments introduced, the temptations to go there would be greater than they now are. At present there is not such a thing as a single carriage or buggy at Pooree; the Europeans either walk, or are carried from place to place in palanquins. No one bathes in the sea, in consequence of the strong and dangerous surf; altogether, it is not at present an inviting watering-place. Were it more resorted to, improvements would doubtless occur. To some it would be a temptation to know that fish, in great variety, is easily procurable there; that remarkably good oysters are to be had for something like a penny a dozen, and that the value of a fine turtle is about one rupee!

There are a great many rivers in the province, most of which have to be crossed by the pilgrims. The principal ones are the Mahanuddy, the Cajori, the Brahminee, the Byturnee, the Kursooa, the Solundi, the Kans Bans, the Burra Bolung, and the Soobranekha. I myself crossed all these, sometimes with considerable trouble. The difficulties encountered by the pilgrims at the ferries must often be great.

Besides the fruits, flowers, and vegetable productions already alluded to (the number of which might be easily extended, all the common supplies of the natural products of the country. General exports. Bengal being also found in Orissa), there is much valuable timber in the province, some of which is exported. The chief varieties are sâl, peâsal, sissoo, kurma, ghîmera, panoos, &c. Vegetable oil-seeds are abundant, and are largely made use of by the people for culinary, lighting, and medicinal purposes. One of the most valuable of these is the *mota tîl* of the Ooriyas, extracted from the fruit of the *punnang* (*Calophyllum inophyllum*). I do not know whether this oil would sell profitably in Calcutta, but if a good market could be found for it, considerable advantage would accrue to the people of Orissa.

The chief mineral products of the province are the following:—Iron-ore, coal, lime, talc, mica-slate, chlorite shist, corundum, steatite, and meerschauum.

Salt used to be manufactured to an enormous extent in Orissa, and in former times it was a great source of revenue; but since 1863 its export has very greatly decreased, the Liverpool market having under-sold that of Orissa. In former days the salt sold within the province yielded a net annual return of Rs. 3,00,000 (Stirling, *Op. Cit.*, p. 128). The principal exports now are: rice, timber, lac, wax, honey, vegetable dyes, skins, horns, resins, and oils.

Rice is the great staple produce of the country. In 1864-65, the total export of it, from the districts of Orissa, was equal to 9,37,528 maunds (of 80lbs.)—(Report of Famine Commissioners, p. 13).

There are two principal crops of rice, the *sârud* and the *beâli*, corresponding to the *amun* and *aoos* of Bengal. Both are sown about the same time, *i.e.*, in May and June. The *beâli* is the early crop: it is reaped in August and September; the *sârud* being reaped in November, December, and January,—chiefly in December. The *sârud* is the rice generally consumed by the people. Another kind of rice is *arrooah*, which is said to be more nutritive than any of the others. It is more expensive, and it is usually made use of by the natives on festive occasions. A fourth variety is *daloo* or *dalwa*, sown in low situations, in the cold season, and reaped in April. It is very inferior in quality to *arrooah*, *sârud*, and *beâli*. The failure of the great rice crop in December, due to want of rain in the preceding months, gives rise to general famine throughout the province. Herein lies the disadvantage of having but one staple article of diet. When that fails, everything fails.

Sutton graphically sketches the general appearance of Orissa, whilst the crops are flourishing, in the following words:—"To a person passing through the province between the months of August and November, the whole tract here referred to will appear like one continuous rice-field: from *koss* to *koss*—yea, from one day's travel to another—he will see scarcely anything but rice, rice, rice, in apparently endless continuation." This is one side of the picture; the other is when, from drought or inundation, the crops are destroyed—a state of things unfortunately but too common. Then the country is dismal in the extreme; famine stalks abroad, and the people crawl about in abject misery. It is sad, indeed, that this should be no uncommon occurrence. Even as I write this, the unwelcome intelligence reaches me that the price of rice in Orissa has again become exceptionally high. Visions of poor unfor-

tunate famine-stricken creatures but too naturally pass before the mind's eye. Should the crops fail next month, again hundreds, and perhaps many thousands, of helpless beings will piteously wander over the land, terrifying the spectator by their misery. It is far from my design to make much of evil tidings, but if it be true that there is a possibility of scarcity ere long again prevailing in Orissa, arrangements cannot too soon be made for the medical relief of the people.

The first great famine we read of in Orissa occurred in the 14th century, during the reign of Rajah Kapil Indra Deo. Rice then sold at sixty times its usual price. Other great famines occurred in the 15th and 16th centuries. Then came that of 1770, then that of 1774-75, and again another in 1792-93. During the present century, those of 1831-32 and of 1865-66 were the great calamities.

The appalling miseries of 1770 have lately been recorded with great vigor of style by the author of the "Annals of Rural Bengal." The following short extracts, taken from different parts of this work, afford some idea of what an Indian famine really is :—

"All through the stifling summer of 1770 the people went on dying. The husbandmen sold their cattle; they sold their implements of agriculture; they devoured their seed-grain; they sold their sons and daughters, till at length no buyer of children could be found; they ate the leaves of trees and the grass of the field; and in June, 1770, the Resident at the Durbar affirmed that the living were feeding on the dead. Day and night a torrent of famished and disease-stricken wretches poured into the great cities."....."The streets were blocked up with promiscuous heaps of the dying and dead. Interment could not do its work quick enough; even the dogs and jackals—the public scavengers of the East—became unable to accomplish their revolting work; and the multitude of mangled and festering corpses at length threatened the existence of the citizens."....."Millions of famished wretches died in the struggle to live through the few intervening weeks that separated them from the harvest, their last gaze being probably fixed on the densely covered fields that would ripen only a little too late for them."....."We cannot help arriving at the conclusion that the failure of a single crop, following a year of scarcity, had, within nine months, swept away *ten millions* of human beings."

The disasters of 1866 in Orissa were almost equal to those above described by Hunter. The Famine Commissioners reported that one-fourth of the population of Orissa was probably "swept from the face of the earth." The Commissioner of Cuttack "found the troops and Government establishments on the point of starvation" (*vide* Famine Report, p. 83); and "the tide of famine eventually surged so high all over Orissa, that local inequalities may almost be said to have been submerged and lost sight of in one wide-spreading sea of calamity" (p. 25). "During the famine of 1866," writes Hunter (*Op Cit.*, p. 26), "it was found impossible to render public charity available to the female members of the respectable classes, and many a rural household starved slowly to death, without uttering a complaint or making a sign." "Orissa in 1866 was in the position of the whole of the province in 1770 ;

it had neither a permanent settlement, nor any adequate irrigation works maintained by the State, and it was the only part of Lower Bengal in which the scenes of 1770 were re-enacted."

The fearful condition of many thousands of Ooriyas in 1866 may be imagined from the following extracts, taken from Baboo Oodoy Chund Dutt's interesting "Report on the Famine in Pooree," which was published in the "Indian Annals of Medicine" :—

"The unfortunate people, after living on herbs, roots, &c., for periods varying from one to two months, were reduced to a state of extreme emaciation. Their bones were all visible and covered by bare skin. The features were shrunk, and the eyes sunk in their sockets. The muscular and fatty tissues appeared to have been entirely absorbed. The mammary glands of adult females were scarcely distinguishable from those of males. The abdomen was sunk, with its walls lying close to the vertebral column. In short, the figure of walking skeletons best conveys the picture of these starving paupers. A peculiar heavy animal smell was emitted from their persons. Their countenances were pinched, haggard, and expressive of great debility and distress.

"During this time also a shocking perversion of the mental and moral feelings was also noticed to be very general amongst them. The unfortunate people were perfectly callous to the sight of death in others, or its near approach to themselves. They had no regard for decency or cleanliness, and sought only to lie unmolested, without caring whether it was in filth and dirt, or in the midst of several dead bodies. Repeated instances had been noticed of large numbers of paupers sitting together and taking their meals, and some among them attending to calls of nature, without stirring one inch from the ground first occupied by them, while the others expressed neither disgust nor anger at such conduct. Robbing of the weak by the strong, and of children by adults, was a most common spectacle, and no consideration seemed to be paid to age or sex."

The Ooriyas are a simple people, who are satisfied with a mere competence, who

The character of the people of Orissa. do as their fathers did, engage in the same work, believe in the same pantheistic dogmas, adhere to the same rules of caste, accomplish the same pilgrimages, repair to the same temples, offer the same sacrifices, perform the same vows, reverence the same *gooroo*s and astrologers, worship the same gods, and wish for nothing new under the sun. Their superstitious love of idolatry is so remarkable, that I have heard of their presenting offerings to the figure-head of an English ship wrecked on the Pooree beach (the said figure-head being a personification of the Queen of the Ocean); and I have even been informed that they have been known to keep by them, for some time, a toy-cat, out of a box of English playthings, and after a while to set it up in their house and recognize it as a fit object of worship! It has been asserted that the constant visits of the people to Juggernaut, their intercourse with the Pandahs, and their familiarity with the stories of Krishna, have stamped them with the grossest immorality. I am inclined to differ on this point. I believe that, on the whole, they are a people not unusually void either of chastity or of self-respect. Their minds are, doubtless, in a manner familiar with many representations and allegories which we must regard as obscene, lustful, and

indecent; but it should be borne in mind that these have sprung out of a profound religious symbolism of an unfathomable antiquity, and that they are to be regarded more as the index of an ancient and unrestrained mythology than as the proofs of an existing and unusual love of impurity and corruption. Stirling is of opinion that Orissa may be fairly styled the Bœotia of India. I am even disinclined to accept this detraction. Stirling's opinion on such a point was certainly very much greater than mine, and his accuracy is in all respects, as a rule, remarkable; yet I am disposed to think that the people are more apathetic and sluggish than positively stupid. An Ooriya rather reminds me, in some respects, of the Irishman in his own country, who has been sketched in the following manner:—"He seems to be either always going to his work, or looking at his work, or resting from his work; in brief, to be doing nothing, cordially assisted by his friends and neighbours." Sutton believes that there is in Orissa "considerably more of conjugal fidelity, of sterling home virtues and domestic happiness, coupled with more general respectability of character, than has been ascribed to the Hindoos generally." He thinks that under favorable circumstances they are even "a loveable people." Their mental inertia is certainly marvellous; they have a proverb in their country which well illustrates this, their national trait of character; it runs somewhat thus:—"I wish to do it; I shall do it; I am just about to do it; I have all but done it,—I have *not* done it.

The people of Orissa subsist chiefly on rice—in one or other of its well-known forms,

The diet of the Ooriyas; and the influence exercised by it on their sanitary condition.

on *dāls* of various kinds, on green vegetables, so-called *sāgs*, spices, oils, and fruits. By some of the inhabitants fish is also eaten; and, when it can be had, the flesh of certain animals.

Grain.

Rice (*Oryza sativa*), before it is husked, is called *dhán*; after being husked, *chaoul*. When the *chaoul* is boiled in water, it is called *bhát*.

The Ooriyas are very fond of boiling rice over-night, adding water to it, and keeping it for twelve hours or more, until acetous fermentation has commenced. They call this *pakál*, which corresponds to the *panto bhát* of the Bengalees. They eat it in the morning with vegetable curry or with dried fish (*sooktee*). (*Vide* "Report on the Food of the Labouring Classes in the Balasore District," by Dr. A. A. Mantell, in the "General Report on Food" already alluded to).

Pulses.

The usual *dāls* or pulses are *moong*, *urhur*, *kullai*, *kessari*, and *koolthee*. (The botanical names of these have already been given).

Vegetables.

The vegetables chiefly consumed are the following: Brinjal, the egg-plant (*Solanum melongena*), the small cucumber or *kheera* (*Cucumis sativus*), the large cucumber or *kukree* (*Cucumis utilissimus*), the sweet potato or *sukkerkund* (*Batatas edulis*), the bottle-gourd or *kodhu* (*Lagenaria vulgaris*, or *Cucurbita lagenaria*), the *koomra* or *suffiaied kuddoo* (*Cucurbita pepo*), yams (*Dioscorea globosa* and *rubella*), &c., &c.

The *bhoota* (*Zea Mays*) is also used, as is the sugar-cane (*Saccharum officinale*).

The *ságs* are numerous :—Palak (*Beta Bengalensis* or *Spinacea oleracea*), soa (*Anethum sooa graveolens*), methee (*Trigonella Fœnum Græcum*), bathooa (*Chenopodium album*), &c., &c.

Ságs.

The principal spices used are turmeric, ginger, cinnamon, coriander, cummin, anise, cloves, and peppers. They are known under the general term *mussalah*.

Condiments.

The Ooriyas do not consume much *ghee*. The principal oils in use are those of mustard, linseed, cocoa-nut, and *til* (*Sesamum Orientale*). As noticed before, they also commonly use castor-oil for culinary purposes! They anoint the body with oil and turmeric; this is particularly done to children exposed to the sea breeze, the influence of which the Ooriyas dread.

Oils.

The commonest fruits are the plantain, the mangoe, the cocoa-nut, the jack (*Atocarpus integriflorus*, Linn.), the bael (*Egle marmelos*), the water-melon, (*Cucurbita citrullus*), the pomegranate (*Punica granata*), the pine-apple, the guava (*Psidium pyriferum*), the date (*Phœnix sylvestris*), and the custard-apple (*Anona squamosa*, Linn.).

Fruits.

The people also take milk, honey, *goor* (molasses), date-sugar, and salt.

The *kurkutch* or salt manufactured by the people of Orissa, Dr. Durant found, on analysis, to contain 90 per cent. of chloride of sodium, 3 per cent. of sulphates, chiefly of soda, and 7 per cent. of insoluble impurities.

Salt.

Average Diet Table.

The same authority tabulates, as follows, the usual articles of diet of the Ooriyas about Pooree, and the average quantities consumed :—

Approximate Diet Table of the Laboring Population of the District of Pooree.

Boiled Rice.	Vegetables.	Dál and Fish.	Parched grain.	Salt and Mussalahs.	Total quantity.
Daily, in three or four meals, of from 3 to 4 chittacks each, or from 12 to 16 chittacks per diem; some individuals going as far as 32 chittacks, or 2 seers, per day.	Occasionally, & scarcely more than once a day; 1 to 2 chittacks a meal.	Seldom more than once or twice a week; 1 to 4 chittacks at a meal.	Generally once a day, about noon; from 2 to 4 chittacks at a time.	$\frac{1}{2}$ chittack per diem.	From 20 to 24 or more chittacks.

Milk and *dhye*, with sweetmeats and such like things, are taken as *extras*, and as occasion or means will admit; the quantity varying from 2 to 6 or 8 chittacks.

NOTE.—The weight here employed is the Cuttack seer, which is equal to $22\frac{1}{2}$ chittacks of the 80-rupees or Company's seer.

Besides rice, the Ooriyas are in the habit of eating a grass seed called *mundiah* (*Eleusina corocana*), Hind. *raggee*. It usually sells at 64 seers for the rupee, and an individual commonly consumes 8 or 10 chittacks at a meal. It is husked, ground into coarse meal, and eaten as porridge, with salt and chillies. It is anything but digestible or cooling, although the Ooriyas consider it so. They are also in the habit of eating *jowar* (*Holcus sorghum*) and *cheena* (*Panicum miliacum*). In hard times the people are driven to eating almost any vegetable production they can pick up, if it be not actually poisonous. Roots, wild grass, and leaves of a thousand sorts are eagerly sought after, whenever there is a threatening of scarcity in the land. Baboo Oodoy Chund Dutt, in his "Report on the Famine in Pooree," has given a list of some of the wild grains, bulbs, &c., which the poor of Orissa eagerly devour in times of famine. Perhaps the most nutritious of these are the *konika* or *kunka*, and the *seerkoortee*, (*Scirpus esculentus*) allied to the *Scripus kysoor* of Roxburgh. *Baloonga*, a species of self-sown rice (from the seed of cultivated rice) is also collected, and *kodoa* or *kodewa* (*Paspalum frumentaceum* or *scorbiculatum*). *Koymool*, the root of the water-lily (*Nelumbium speciosum*), and its leaves are also used as food, as are also *toonjee* and other species of wild yams. The pulpy part of the *drupe* of the serew pine, *keaponso*—Beng., *keora*—(*Pandanus odoratissimus*, Linn.) is eagerly devoured. During the famine of 1866, those who were destitute consumed *geeringa sâg* (*Salicornia Indica*). Baboo Oodoy Chund writes of it thus:—"It is very unwholesome. Its prolonged use brings on dysentery, diarrhœa and anasarea, ascites and emaciation. People who lived long on it presented a pot-belly with emaciated limbs, and a haggard countenance." One poor woman told me that there were nine members in her family. They had all to live for about twelve days on *geeringa sâg*. Eight of them died, and when she was left alone, she started for the Pooree *Unnochutter*. This *Salicornia Indica*, on incineration, yields a large quantity of barilla for soap and glass.

The Ooriyas, from childhood, smoke tobacco. They are, perhaps, never so happy as when they are puffing away at their ragged, green, home-made cheroots. They are also fond of *gunja*—Indian hemp—(*Cannabis Indica*). The plant occurs abundantly around Pooree. Whilst it is in flower, it is gathered and dried, and then smoked either alone or mixed with tobacco. In this form it is known as *gunja*. *Bhung* or *petee* consists of the leaves and capsules of the plant ground down and mixed with water. It is either taken with water alone, or sometimes it is mixed with black pepper and sugar. *Majoon* is a decoction of the leaves of hemp mixed with sugar, in the form of confection. It is dried in the sun, and, when required, it is cut with a knife. It is sometimes called *bhung-rootee* (bhung-bread).

Opium (*Papaver somniferum*) is also largely consumed in Orissa. It is either taken alone, or, when melted, is mixed with parched betel-leaf and made into pills of about 5 grains each. This preparation is known as *mudut*, and it is smoked in the *hookah*.

The Ooriyas are also in the habit of distilling a spirit from rice; it resembles rum, and is called *mada*.

All classes chew *pân*, which consists of pieces of the nut (*sooparee*) of the betel (*Areca catechu*), generally mixed with quicklime, *katha* (gum of *Acacia catechu*), tobacco, and condiments, wrapped up in the betel-leaf (*Piper betle*), stripped of its midrib.

The people of the hill tracts to the west of Orissa, as the Coles and Ghonds, live chiefly on boiled rice and vegetables. They will, however, eat almost any kind of flesh, even though it be in an advanced stage of decomposition. They rather object to vultures, but they are fond of rats and ants ("black and white," which they call *Roatacot daroo* and *looah*).* They indulge to excess in potations of intoxicating liquors, particularly of a spirit made by distillation from the flower of *Bassia latifolia* (*muhoora* or *mowa*). This spirit they call *hurreeh*. "If they get this," writes Dr. A. J. Meyer, Civil Surgeon of Chyebassa, "they are able to go without food for days and remain quite satisfied, and work remarkably well whilst its influence lasts. One meal a day of rice with some *hurreeh*, or the latter only, suffices a greater number of the poor and labouring classes of the Coles." This curious people use no medicine in the treatment of disease. They trust entirely to the sacrifice of birds and quadrupeds. "The poorest of them," writes Dr. Meyer, "keep fowls, pigeons, and goats for this purpose. Many a family is ruined, should there be a sick person in the house labouring under a chronic disease, and requiring these offerings daily for invoking their gods to alleviate their sufferings."

In different parts of Orissa, *toddy*, or *taree*, is obtained from the wild date, *khejoor*, or *kuzoor* (*Phœnix sylvestris*). This is obtained by tapping the tree below the lower leaves. *Toddy* is also obtained from the *tal* (*Borassus flabelliformis*), a much loftier palm than the *khejoor*.

Having noted above some of the common articles of consumption in Orissa (many, from want of space, have been omitted), I will say a few words about their effects on the *physique* and *morale* of the race.

There can be no doubt that a people who live so much on a purely vegetable diet as the Ooriyas do, acquire the azotized elements of food, as it were, at a disadvantage. The protein compounds which they assimilate are derived almost entirely from large quantities of highly azotized, but somewhat indigestible, vegetable substances, such as the various lentils. It has been said, "what meat and butter are to bread in Europe, the same is *dāl* to a Bengalee's rice."

Rice, when not kept sufficiently long (and good rice should be kept for two or three years), is very apt to produce dyspepsia, flatulence, colic, and even bowel complaints.

Some say that new rice is provocative of rheumatism; and an explanation (which has been offered for this by Dr. W. B. Beatson) is that digestion is thus impaired and an excess of lactic acid formed.

* *De gustibus non est disputandum!* The Sonthals and Dhangurs also eat rats, squirrels, snakes, and jackals. The men of the Bowree caste "eat cats and decomposing animal matter, irrespective of the manner in which the animal met its death." (*Vide* Dr. Bernard Kendall's "Report on the Food Consumed in the Midnapore District.")

The hillmen in Assam eat pups and leopards' flesh, and fish in a state of rottenness. In contrast to such tastes, it is to be observed that onions and garlic are considered unclean by the orthodox Hindoo, and as such they are proscribed by the Shastras. Lastly, the Burmese consider milk an unclean thing!

The same author states that *mussoor* (*Cicer lens*) and *urhur* (*Cystisus cajanus*) are said sometimes to produce night-blindness and burning of the hands and feet.

Kullye (*Phaseolus Roxburghii*) is also said to predispose to rheumatism.

The ill effects of these pulses are believed to be modified by their being cooked with *ghee*, oil, or scraped cocoanut, which, according to Dr. Beatson, probably promotes the solution of their caseine.

The *kessari dāl* (*Lathyrus sativus*) is, in many parts of India, believed to produce bowel complaints and a wasting paralysis.

The small maize, *jowar* (*Andropogon sorghum*, or *Sorghum vulgare*), is apt to produce "enlarged abdomen, and a general deficiency of muscular development;" also pale conjunctivæ and a scaly epidermis.

Any of the *dāls*, if not carefully cooked (and well freed from their husk), are liable to induce bowel complaint, herpes, &c. The most easy of digestion of the *dāls* is *moong* (*Phaseolus mungo*). The *khooltee* (*Dolichos biflorus*) is said sometimes to produce œdematous swellings; and the *burra jowar*, or *mukkaie*—Indian corn—(*Zea Mays*) is believed to cause ague.

Some believe that eating largely of quicklime in *pán* may possibly account for the prevalence of bronchocele; whilst others seem to be of opinion that the disease, which prevails severely in low and marshy lands, may be dependent on malaria. *Pán* stimulates the salivary glands, and the lime acts as an antacid, which is probably beneficial to a people of such vegetarian habits as the Hindoos.

Opium, in small quantity, also possibly assists the digestion of a native, and it may counteract dyspepsia. But, when it is taken in large quantity, there can be no doubt that it debilitates, and renders those who indulge in it susceptible to the action of disease. All narcotics and intoxicating drinks of whatever sort, taken to excess, must affect deleteriously both the physical and mental condition of a people.

Stale fish causes cutaneous diseases, ulcers, sloughing sores, diarrhœa, and other grave disorders.

The vegetable acids are no doubt very beneficial. Those chiefly taken in Orissa are tamarind, *chulta* (*Dillenia Indica*), *amra* (*Spondias mangifera*), limes, lemons, sorrel, &c.

Tamarind, which the Ooriyas use freely, is a good antiscorbutic.

It is said that a strong infusion of tamarind produces abortion. (*Vide* "Report on Food," by Dr. Bholanauth Bose, Civil Medical Officer of Furruckpore).

The pine-apple is said to be anthelmintic.

Altogether, I think we may safely say that the nature of the diet common in Orissa not only accounts, to a considerable degree, for the inertia and want of enterprise of Ooriya character, but that it likewise affords a key to the knowledge of much prevailing disease.

When we bear in mind that much rice in Orissa is eaten far too soon after being reaped; that the *ddls* are often but imperfectly husked and badly cooked; that, from destitution or poverty, many of the people are almost obliged to eat whatever they can get, however innutritious it may be; that water-supply generally is bad and unwholesome; that faulty domestic conservancy arrangements are the rule and not the exception; that the habitations of the people are often on low-lying ground, densely surrounded by swamps and jungle; and that malarious exhalations abound, we can scarcely wonder that a large proportion of the Ooriyas are in a cachectic state, having their blood and secretions deteriorated, their countenances ex-sanguine, their muscles feeble and flabby, and their spleens enlarged. Gastric and intestinal affections, glandular enlargements, rheumatism, and such cutaneous diseases as scabies, impetigo, and herpes are their common afflictions; whilst fevers, dysentery, epidemic cholera, and small-pox annually account for an exceptionally high death-rate.

The consideration of the question, how far the religious rites of Hindooism are capable of affecting the physical well-being of the nation, involves a vastly interesting study, which cannot now be entered on. I will only here remark that many of the religious forms and ceremonies to which the Ooriyas fondly cling, either involve fatigue, fasting, penance, and pain, or, on the other hand, they lead to feasting, dissipation, sensual excesses, reckless orgies, and great mental excitement. These two sets of influences probably account for much prevailing sickness, and even mortality. I can only, however, allude to this subject in a general way at present. It is one upon which a great and useful work might be written. Peggs stated but the simple truth when, nearly forty years ago, he wrote, "where suttee has slain its thousands, pilgrimage has slain its tens of thousands." The loss of life from the first of these causes is now at an end: from the latter, in proportion to the actual number of pilgrims, it is as great as ever.

I left Pooree late on the evening of 2nd July, having been ten days there. Reached Satyabadee at 6 A. M. the following morning, and got as far as Piplee that forenoon. I there visited the Orphanage, and was much pleased with what I saw of the internal arrangements of the place. The poor children are the objects of sincere and constant solicitude. The philanthropic exertions of Mrs. Goadby and of Miss Packer, the ladies of the Mission, have left on my mind impressions like to those that are linked with the names of Florence Nightingale and Elizabeth Fry. It is not too much to say that they are earnest and valuable allies in the cause of medicine and sanitation in Orissa.

On the morning of 4th July, before daylight, I went on to Bhobanessur.

This place of ruins, formerly a capital city, and the seat of government of the Kesari Prinees, is now visited by the traveller with deep interest. The pagoda of the *Ling Raj Bhobeneswera*, founded A.D. 657 by Rajah Lalat Indra Kesari, and by him dedicated to Mahadeo (Siva), rises majestically over a mass of crumbling temples, covering miles of ground. It is said that forty-three years were required for the construction of this temple, which is the oldest in Orissa. It is certainly a very fine specimen of the ancient architectural genius of the Hindoos. It is even now firm and massive, and it conveys an impression of stern grandeur as it towers above the melancholy scenes surrounding it, which are thus described by Stirling :—

“Standing near the chief pagoda, one cannot turn the eye, in any direction, without taking into the view upwards of forty or fifty of these stone towers. The natives say that there were originally more than seven thousand places of worship consecrated to Mahadeo, within and around the city of Bhubanessur, containing no less than a crore of lingams, and the vestiges that remain fully warrant a belief that the place may have comprised some *hundreds* of buildings of this description when in its most flourishing state. A considerable number of the temples are still in a tolerable state of preservation, though *entirely neglected and deserted*. Many more are now screened from the view by the luxuriant foliage of the surrounding jungles, or present merely shapeless masses of stone buried amidst tangled brushwood and rank vegetation.

“Nor is the astonishing number of the Bhubanessur temples the only remarkable feature of this place. The style, size, and decoration of these singular buildings add greatly to the wonder and interest of the scene.”

“The exterior surface of the buildings is in general adorned with the richest and most elaborate sculptured ornament, and the ruined courts which surround them are strewn with a vast variety of curious relics, as bulls, lingams, and other symbols appropriate to the worship of Mahadeo, representations of Ganesa, Hunuman, and various forms of Siva and Parvati, Durga, or Kali, Carticeya the god of war with his peacock, the female or energy of the same called Caumari, and the Narasinha and Baman Avatars. The more finished temples have frequently large well-polished slabs of the grey chlorite-slate, or pot stone, let into three of their sides, on which are sculptured, in alto relievo, nearly as large as life, some of the above personages, executed with no mean degree of skill and symmetry. Carved in the coarser stone, of which the walls are constructed, one observes figures of Apsarasas, or dancing nymphs, in groups or solitary; forms of Mahadeo and Parvati sitting or standing together, generally in the most obscene attitudes; representations of warriors, horses, and elephants, engaged in combat or arranged in state procession; monsters resembling lions, with grim grotesque countenances, in various attitudes; and groups of a peaceful character exhibiting a muni, or philosopher, imparting instruction to his pupils. The architrave of the doorway of every temple of Orissa is ornamented with nine figures in a sitting posture, called the Nava Graha or nine planets, of which seven represent the divinities presiding over the days of the week, and the two remaining ones the brahminical ascending and descending nodes, Rahu and Ketu.”

Bhubanessur (situated 3 miles east of the Calcutta road, and 33 miles from Pooree) is now a place of time-worn ruins and of scattered dilapidated pagodas, in great part concealed

by rank and luxuriant vegetation. With the exception of the great Ling Raj temple, and two very fine large tanks, the ancient glory of the place has entirely past away. In every street one comes upon hoary monuments of antiquity, and the remains even of a religion which has been abandoned (the worship of Sib having been superseded, in Orissa, by that of Krishna). Still one sees on all sides that symbol of Sib-worship—the Lingam, which is thus alluded to by Lawrie :—

“The Lingam, or principal type of the regenerator, Siva, is nothing more than a conical stone, generally smooth and black. This symbol is to be seen at Bhobanessur, in conjunction with the *Argha*, a sort of dish from whence it proceeds, the *Joni* (the female nature) forming the ruin. There is no apparent indecency about these symbols, which leads Moor to remark : “Unlike the abominable realities of Egypt and Greece, we see the phallic emblem in the Hindoo Pantheon without offence, and know not, until the information be extorted, that we are contemplating a symbol whose prototype is indelicate.”*

There is one main street in Bhobanessur, where we find native shops, pandahs' houses, muths, and a small Police Station. This street is broad, and is kept tolerably clean. Leaving the principal thoroughfare, however, one comes at once upon houses which are crumbling away, upon shattered sanctuaries, and upon long-forsaken labyrinths where, twelve centuries ago, the people of Ootkul (the Orissa of former times, which then extended from the Hooghly to the Carnatic) worshipped (Sib) the destroyer, and where now rank vegetation, reptiles, and birds and beasts that love darkness and desolation are only found.† It is a place which has been laid waste by time ; yet it is still very imposing from the magnificent confusion of the granite ruins which indicate its ancient grandeur. On the whole, it recalled to my mind the idea of the city which we read of in Arabian fable, whose inhabitants were in a moment turned to stone, “so that the traveller wandered in amazement through palaces and halls, where none came forth to meet him, and no sound was heard but the echo of his own steps.” If Bhobanessur, in consequence of its past historic associations, interests the European traveller, it is scarcely necessary to say that to the Indian pilgrim the place has vastly greater charms. With his inborn fondness for antiquity, he here finds himself in a glorious atmosphere of decay, whilst the *admonitus locorum* speaks to his soul with a vague eloquence which he cherishes and reveres.

The pilgrims from Calcutta generally visit Bhobanessur on their way to Pooree ; whilst those from Sumbulpore, Chutteesghur, and Central India usually go direct to Pooree, and take Bhobanessur on their way *back*.

* The Christian pilgrims of the 4th century frequented the tombs of martyrs in the hope of obtaining temporal and spiritual blessings, preservation of health, fruitfulness of barren wives, or the safety and happiness of their children. “The walls of such tombs were hung round with symbols of the favors which they received: eyes, and hands and feet, of gold and silver ; and edifying pictures, which could not long escape the abuse of indiscreet or idolatrous devotion, represented the image, the attributes, and the miracles of the tutelar saint.” (*Vide* Gibbon's “Rome,” Vol. III., pp. 305-6, Bohn's Ed.)

† “Miremur periisse homines ? Monumenta fatiscunt.
Mors etiam saxi, nominibusque venit.”

In a sanitary point of view, it would be utterly vain to hope that what exists of Bhoanessur could ever be thoroughly cleared and kept free from nuisances. The pandahs' houses might, however, be regulated here as at Pooree. In other respects it is fortunate that pilgrims merely visit Bhoanessur for a day or two at a time, and do not think of remaining there for any lengthened period. Immediately outside the ruins we come upon an open, rich rice-producing country.

Leaving Bhoanessur, I returned to Sadayepore, which is six miles to the north of Piplee. The following morning, July 5th, I reached Cuttaek.

Dr. W. D. Stewart, the Civil Surgeon, very kindly received me. I stayed there three days. During that time I went, as a visitor, to the Jail, the Lunatic Asylum, the Dispensary, and the *Unnochutter*. Mr. Moloney, the Officiating Commissioner (during the absence of Mr. Ravenshaw at Keonjhar), and Mr. Armstrong, the Magistrate, both courteously afforded me information and assistance.

Cuttaek lies between the Mahanuddy and Cajori rivers. It was permanently added to the British possessions in 1803. It was originally one of the five *Kataks* or royal residences of the second of the Ganga Vansa princes. Its ancient name was *Katak Biranesi* (Benares). It was founded A.D. 989.

In the vicinity of the town is the old fortress of *Barabutti*, built in the 14th century by Rajah Anung Bhim Deo, who also erected the Great Temple of Juggernaut, at Pooree, at a cost of from thirty to forty lacs of rupees. ("The date of its completion was A.D. 1193, when the worship was established or re-established with great splendour.") These and other great public works were executed by Rajah Anung Bhim, as an expiation for the offence of having killed a Brahmin.

On the 6th of July, accompanied by Dr. Stewart, I visited the Orphanages of Cuttaek. One is for male children, the other for girls. The former is called "Peyton-Saye,"—the estate, with two houses, having been presented to the Baptist Mission by J. Peyton, Esq., some ten or eleven years ago. These establishments may well be mentioned in a sanitary report. They are most useful refuges for children, who, for want of friends and care, must have perished outside.

I examined the school-rooms, the dormitories, the hospitals, the workshops, the latrine arrangements, and the play-grounds. The children were clean in person and dress, and they looked very happy. Everything about the place evidenced good discipline, unceasing supervision, and anxious care. The object of these institutions is to train up the children to habits of cleanliness, industry, truth, and self-dependence; to teach the boys trades and employments by which they can earn an honest livelihood; and to rear the girls so that in after years

they may be "sensible, modest, industrious, and pious women." The girls are taught knitting, sewing, crochet, and spinning, and they are also instructed in reading, writing, arithmetic, and singing. The boys are taught everything that is likely to be useful to them in after-life. I saw them working as carpenters, blacksmiths, weavers, gardeners, tailors, and cooks; some also do the work of writers and compositors. In one shed they had men teaching them to turn in ivory. They also receive careful secular and religious instruction. Those of better

The kindness of the Missionaries ability and higher promise are taught English, and trained for
towards the orphans. intellectual duties. In every respect they are treated with the
greatest kindness; whilst their benevolent guardians act up to the wise principle that "the
sacred rights of parents or near relations, whenever such can be found, and when they are
willing to support the children, shall never knowingly be violated."—(*Vide* Report for
1866-67, p. 18).

The asylums in Cuttaek were opened on the 3rd of May, 1836, with only six boys and
threc girls. This number was soon increased by the pressure of
History of the Orphanages. famine. In the following year the atrocities perpetrated by the
Khonds, in Goomsur and Boad, were disclosed to the civilized world; and seventeen children
(fourteen boys and three girls), the first rescued by the Bengal Government from the horrors
of Meriah sacrifice, were received into the schools.

"Ten years after these asylums were established, it was reported that 230 young persons
of both sexes had been boarded and educated;" and from 1837 to 1861 no less than 89
reseued Meriahs were received into the two asylums.—(*Vide* Report for 1861-62, p. 22).

But for this happy deliverance, all those children would have been slain for the object
of propitiating Ceres, and their flesh would have been deposited, piecemeal, on the ground,
to fertilize the turmeric fields of Goomsur.—(*Vide* Sutton, p. 229).

No more inhuman rites were ever perpetrated than those of so-called Meriah poojah, or
Khond sacrifice.

The following invoeation to Bhobanee, the Khond goddess, shews with what exultation
the people anticipated a human sacrifice:—

"Hail, mother, hail! hail, goddess Bhobanee!
Lo! we present a sacrifice to thee:
With music's various sounds, on festive day,
Lo! thee we worship, and thy rites obey.
O! all ye gods and goddesses give ear,
And be propitious to our earnest prayer.
Blooming with tender flesh, and flushed with blood,
No sire, no matron says this youth is mine;
His flesh, his blood, his life, his all are thine.
Without the pale of sacred wedlock thrown,
We took and fed him for thy rites alone.
Now lo! with rites from all pollution free,
We offer him, O Bhobanee, to thee;
Taste now this offering, satisfy thy heart,
And bid us joyful to our homes depart."

This extract was translated by the Revd. Mr. Lacey at Cuttack from the recitation of "a great fat Khond boy," who himself would certainly have been sacrificed but for his good fortune in falling into the hands of English officers, who rescued him from so unhappy a fate.—(*Vide* Sutton, pp. 231-2).

The Missionaries have been nobly supported and, it may be said, guided by the Government in this good work of befriending rescued Meriahs.

At a period when famine desolated Orissa, the Missionaries passed much of their time in the relief of suffering humanity. They fed the poverty-stricken and befriended them. All that generous sentiment or disinterested virtue could prompt, these good men and earnest women delighted to do. Acting in concert with Famine Relief Committees, they were enabled to save from death many who must otherwise have perished. Friendless beings came to them and at once enjoyed sympathy and relief. Motherless or fatherless children and orphans, driven by fate to their doors, were received with parental kindness. The orphans under their care are allowed a subsistence allowance by the Government (three rupees each per mensem, and twenty or thirty rupees each to start in life with). I have seen the children in the houses of these Missionaries treated with the utmost kindness, and in a manner evincing the heartfelt interest taken in their happiness and welfare. As stated above, I have seen them systematically taught useful trades and the rational occupations of everyday life. In sickness I have seen them cherished as though they were of the same blood as their benefactors. It affords me deep and sincere pleasure to bear testimony to these facts. The sedulous philanthropy of the Baptist Missionaries in Orissa reflects great credit on the English name and rule. One of their number once asserted that the Government of this country had no more attached friends than they (Sutton, 128). This is a truth. The Missionaries, however, of Orissa are not only apostles of evangelization and education—though such is certainly the chief end of their ambition—but they are the friends of sanitation, the dispensers of medicine to the sick, the clothers of the naked, the feeders of the hungry, the shelterers of the exposed, the guardians of friendless widows and orphans. They have an intimate knowledge of the people, their language, their modes of thought, and their everyday wants. They have rescued many children from poverty, prostitution, and immolation. Stimulated by the noblest motives, their zeal tempered by good judgment, these are men to whom, in my opinion, the Government might well entrust more money and resources for the counteraction of much physical degradation and misery ever present in Orissa. I have written at some length on this subject, because I believe the Missionaries to whom I allude would be willing in the future, as they certainly have been in the past, to act as the stewards of Government charity. As is stated in their reports, it is scarcely necessary to observe that they derive no personal benefit from any contributions they may receive; every fraction is faithfully spent and as faithfully accounted for.

The behaviour of the Missionaries during times of famines

They are staunch allies to the humanitarian, and noble almoners of State charity.

They are staunch allies to the humanitarian, and noble almoners of State charity.

The late Mr. Coekburn, formerly Commissioner of Pooree, at a public meeting in 1861, said: "I have always taken a deep interest in the prosperity of the Orissa Mission, and I have

been repaid tenfold." The same I believe will be the experience of the Government, to whatever degree it may invite these steadfast Missionaries to act as the almoners of State charity.

When I visited the Orphanages of Cuttaek, I found that there were 320 boys at Peyton-Saye, under the charge of the Revd. Mr. Miller ; and in the adjoining establishment, 320 girls with the Revd. Mr. Buckley and Mrs. Buckley, and 180 with Miss Guignard. This was exclusive of the 400 children with the Revd. Mr. Goadby, Mrs. Goadby, and Miss Paeker, at Piplee ; making, at the two stations, a total of 1,220 orphans, well eared for and under good management. Besides these also, there are the Orphanages of Balasore and Berhampore, of which I do not happen to have the statistics.

Since I left Orissa, one of the Missionaries whom I met there has passed from this world. The Revd. Mr. Goadby, of Piplee, died shortly after I left the province. His mission lay, for years, among the *Pulindas* or barbarous mountaineers of the hilly regions of Orissa, chiefly among the Khonds. With Russel-Condah as his base of operations, he delighted to penetrate into the solitary places of Khondistan, and there, amidst the dirt, drunkenness, and destitution of the people, to do what lay in his power for their welfare, and for the softening and enlightening of their savage natures. He was a perfect enthusiast in his fondness for this aboriginal people, and all his energy was for years consecrated to the cause of their amelioration. A good man, he was but one of many connected with the Orissa Baptist Mission who (to me as a mere journeyer through the province) seem to have done incalculable good for the people of the country. As I said before, their works are, at every turn, associated with the physical welfare of the Ooriyas. It is on this account that I have devoted considerable space to a notice of their good deeds.

Statistics of mortality from cholera at and around Cuttaek this year.

On the whole, the mortality from cholera amongst the pilgrims this season was not so great as it has usually been in past years. The natives generally and the Police agree in this opinion.

The disease appeared in Rancehat, Munglabad, and Buxee Bazaar,—three villages situated near the road which pilgrims take in passing round Cuttaek (they are not, as a rule, permitted to come into the station). The first case of cholera reported to and by the Police, occurred on the 29th June, in the town (Baloo Bazaar), in the person of a woman who died. No more cases were reported on the 30th, or on the 1st and 2nd July. On the 3rd, one "Siboo Misser" died in the Chandney Chowk, and on the same day, in another bazaar, two other persons, named "Bhukary Sing" and "Sora Bewa." On the same day, in Buxee Bazaar, three persons died, one in Oocha Saye and one at Munglabad. On the 4th instant, one died at Jobra ; and on the following day another death occurred there. Thus eleven deaths from cholera were reported at Cuttaek itself from 29th June to 6th July. *In the vicinity*, during the same period, thirteen more deaths occurred, making twenty-four in all. The Police only report casualties, not seizures. On enquiry, it was discovered that there had been about as many recoveries as deaths.

On the 6th July, Mr. Lacey, the Police Officer at Cuttack, wrote as follows, in reply to an enquiry made, at my request, by Dr. Stewart :—"The reports from the road ten miles out of Cuttack, both ways, give 37 deaths of pilgrims from cholera since the 22nd June to the end of the month." Twenty-one cases were treated in the Chowliagung hospital from 24th to 29th June ; of these eleven died.

This establishment was originally the Famine Relief Hospital. It is now a branch of the Civil Dispensary. I visited it with Dr. Stewart. Heavy rains had reduced it to a very ruinous condition. Dr. Stewart applied to the local authorities for its re-erection, on the ground that the continuance of such an establishment in the outskirts of the town is very desirable. There can be no doubt of this, and I hope it has been kept up. It would be difficult to find a more convenient site for a hospital for the reception of special cases.

It has been noted above that passing pilgrims are not allowed to enter the town or station of Cuttack. Residents of the place, however, are permitted to go freely to Pooree, and to return without any restrictions. Again, the townspeople of Cuttack are not prevented from going out and associating with the pilgrims at the places where they are halted.

Dr. Stewart visited Dhurmsalla, which is on the Brahminee, 32 miles north of Cuttack, on the 14th July. At that time there were scarcely any pilgrims on the road. The cholera hospital there furnishes the following statistics :—

				Treated.	Died.
May	..	..	..	5	2
June	..	..	..	47	19
Up to 14th July	..	..	..	35	5
Total				87	26

In Khunditur there were in June ten, and in July twelve deaths.

So far as Dr. Stewart could learn, cholera had not extended to any of the neighbouring villages, excepting Gopalpore, on the Brahminee, opposite Dhurmsalla. He thus writes of the condition of things there :—"During the floods, the Brahminee could not be crossed for many days ; the Gopalpore side was one sheet of water. At this time the pilgrims, *on their way to the Ruth Jattrra festival*, were detained at Gopalpore. No one knows how many were collected there, or how many were washed away. The remains of recent corpses were strewn about the sand, and identified as those of pilgrims. At this village alone has cholera made some impression. Up to the 7th July, nine deaths were reported by the Police ; the natives, however, seemed to think that 50 or 60 had occurred. There were still a few cases remaining at the time of my visit.

I directed the Native Doctor at Dhurmsalla to visit this spot frequently, and, if necessary, to stay there some days. He had already supplied medicines to some who applied for it. I called the attention of the Inspector of Police to the corpses lying on the Brahminee sands; he at once sent out men to have the remains properly removed and put out of sight. *Inno other village has cholera extended from the main line of road on which the jatrees passed.* Dr. Stewart reports observing 28 cartloads of *moha-persad* crossing the Brahminee. It was being taken from Pooree to Calcutta, quite independently of the pilgrims; more had gone on in advance, and yet more was to follow.

I left Cuttack at 4 P.M. of the 7th July.

Leave Cuttack.

Reach Jajipore.

Reached Jajipore on the following day at 9 A.M., and left it at 9 P.M. of the same day.

Jajipore is a place very celebrated in the annals of Orissa. It was a frequented shrine so far back as a thousand years ago; and the *Kesari* and *Gunga Vansa* Rajahs held court there. Its name signifies "the city of sacrifice," in consequence of Brahma having here performed the great sacrifice called "*Das Aswamed'h.*" All the Hindoo gods and goddesses are supposed to have been present on the occasion; and *Gunga gee* has ever since flowed through the district as the Byturnee, "which, descending into the infernal regions by an opening near Jajipore, becomes there the *Styx* of the Hindoo Tartarus" (Stirling). Jajipore is believed to rest "on the navel of the great giant Gaya Asur, who was overthrown by Vishnu," and whose head rests at Gya, whilst his feet are at Rajmundie!

The Naab Gaya is a temple two or three miles out of the station, which is well worthy of a visit. No European may invade the sanctity of its interior, but its outer walls present some remarkable specimens of statuary. In this temple is a well which is supposed to reach to the navel of the giant Gaya Asur, and into this Hindoo pilgrims "cast the *pindah*, or cake of rice and sweetmeats, as an expiation for the sins of their ancestors." At a temple on the banks of the river are found seven of the most remarkable pieces of statuary that I have seen in India. They are colossal, cut out of basalt, and represent seven female divinities (Matris). They are marvellous specimens of art. Lastly, in the vicinity of a Mahomedan mosque, called the Bokari, three similar idols were discovered, representing Kali, Varathi, and Indrani. These were cast from their thrones into the dust by the Mahomedan conquerors of Orissa; but they have at last been removed from so undignified a position, and they are now carefully preserved in an open field adjoining the residence of the Assistant Magistrate. I have seen no more striking works of art in India than these. Their presence at Jajipore indicates how important a shrine it must once have been, and accounts for the fondness with which pilgrims still visit the place. It is situated 9 miles east of the Calcutta road, and 43 miles from Cuttack.

The dispensary at Jajipore is a most important one, inasmuch as many thousands of pilgrims pass through this place every year. I was distressed to see its operations greatly restricted from want of funds, or rather from *want of payment of promised subscriptions*. As the working of such an establishment is clearly a very important sanitary question, I trust the Deputy Inspector-General of

Remarks regarding the Jajipore Dispensary.

Hospitals will understand that the following remarks, which I took the liberty of entering in the Dispensary book, were dictated by no desire to interfere with his duties, but simply from a wish to better, if possible, the sanitary interests of pilgrims passing through Jajipore :—

“*July 8th, 1868.*—I came and inspected the Dispensary, as a visitor. The building is very well suited to its purpose. The Native Doctor, “Meer Koomer Ally,” deserves *much* praise for the clear and tidy state of this establishment. It is greatly to be regretted that the subscribers do not pay up what they have promised. I find that *Rs. 272 of arrears are unrealized*; and all in-door patients have to be denied admittance, because the realized subscriptions only cover the urgent expenses for out-door relief. This is very discreditable to those natives who have deliberately promised to support the institution and pledged themselves to pay, regularly, sums which it seems in reality impossible to realize.

“This dispensary is most importantly placed. Thousands of pilgrims annually pass through the place. If unrelieved, they carry diseases with them wherever they go. I hope, in a sanitary point of view, that something may yet be done to enforce payment of promised subscriptions to this institution. Failing this, it appears to me that further Government support should be solicited, as a special case. It is very sad to see, at the doors of an institution of this kind, (well-built and well-regulated,) admittance refused to those seeking in-door relief. Could not subscriptions be raised in Cuttack for the support of this much-required charity? I think the Commissioner, the Clergyman, and other officials there might be invited to interest themselves in this matter. It is one of no mean importance. The public health of Cuttack might at any time be very seriously affected by the fact of in-door relief being denied here.

“I think the Native Doctor and the subordinate establishment deserve *great* credit for the way in which they seem to perform their duties, under circumstances which are, to say the least, very disheartening.”

The first case of cholera reported this season at Jajipore occurred on the 13th June (two days later than the first case which occurred at Bhudruck).
 Statistics of cholera at Jajipore. The patient was a female pilgrim, from Midnapore; she died.
 On the 15th June five cases occurred, all pilgrims coming from the direction of Midnapore; one of them died.

On the 16th there were three cases, all females, from the direction of Midnapore; two died and one recovered.

On the 17th there were no cases; on the 18th, four cases, all females, from the direction of Midnapore,—two died; on the 19th, three cases, all females, from the direction of Midnapore,—one died and two were cured.

There were in all sixteen cases, with eight deaths. No cases occurred after the 19th.

Leave Jajipore.

Reach Bhudruck.

Leaving Jajipore at 9 P.M. of 8th July, I reached Bhudruck at 7 A.M. the following morning, and was there kindly received by Mr. R. Rampini, the Assistant Magistrate.

Statistics of cholera at Bhudruck.

The road between Jajipore and Bhudruck was very broken and difficult. In many parts it had been *entirely washed away*.

The statistics I received here are of some importance. They shew very clearly the direction in which cholera was passing in June and July. The following is the Table which I received from the Native Doctor, "*Shaikh Ruheem*":—

Statement of Cholera Cases at Bhudruck, from 11th June to 9th July, 1868.

Date.	SEX.		From where.	Discharged.	Died.	Remain- ing.	
	M.	F.					
11th June ...	1	...	Balasore	Going to Pooree.
12th " ...	...	1	Ditto ...	.....	.....	.....
14th " ...	1	...	Ditto ...	.....	1	.....
15th " ...	1	...	Ditto ...	1	.....	.....
16th " ...	1	1	Ditto ...	.....	.....	.....
17th " ...	...	5	Ditto ...	1	1	.....
18th " ...	3	5	Ditto ...	2	1	.....
19th " ...	7	10	Ditto ...	.....	1	.....
20th " ...	3	15	Ditto ...	3	5	.....
21st " ...	1	3	Ditto ...	3	8	.....
22nd " ...	1	4	Ditto ...	2	2	.....
23rd " ...	...	...	Ditto ...	4	1	.....
24th " ...	...	1	Ditto ...	3	2	.....
25th " ...	...	1	Ditto ...	6	1	.....
26th " ...	...	...	Ditto ...	1	.....	.....
27th " ...	3	...	Ditto ...	.....	1	.....
28th " ...	...	...	Ditto ...	2	2	.....
29th "	1	Cuttack	1	From the direction of Pooree.
30th " ...	3	...	Ditto ...	2	1	.....
1st July ...	1	1	Ditto ...	.....	.....	.....
2nd " ...	...	1	Ditto ...	2	2	.....
3rd " ...	1	2	Ditto ...	2	2	.....
4th " ...	...	4	Ditto ...	.....	1	.....
5th " ...	2	...	Ditto ...	3	1	.....
6th " ...	...	...	Ditto ...	1	.....	.....
7th " ...	...	...	Ditto ...	1	2	.....
8th " ...	...	...	Ditto ...	1	.....	.....
9th " ...	...	3	Ditto ...	2	.....	9
						M. F. 1 8	
Total	26	61	42	36	9	

From the above it is clearly seen that all the cases of cholera which occurred at Bhudruck, from 11th to 30th June, occurred in the persons of pilgrims, who stated that they were on their way *from Balasore to Pooree*; whilst, from 29th June to 9th July, all the cases occurred amongst individuals who, coming *from the direction of Pooree, were journeying northwards*. This is a very important return. It displays not only the precise direction of the "cholera-wave," but it also goes to prove that cholera was, this year at least, prevailing at places to the north of Pooree, before it appeared in Pooree itself.

One fatal case of cholera had occurred at Bhudruck on the 2nd of April, 1868. The patient was a resident of the place (Mr. Rampini's *mallee*). From 2nd April until 11th June no case had occurred.

From the 5th to 11th June, constant rain fell at Bhudruck, after which there was a week of dry weather.

Visit the Dhurmsala and the Dispensary. I have already alluded to the fact of the dhurmsala at Bhudruck being in a dismantled condition. I visited the dispensary, in which there were nine cholera cases.

I left Bhudruck at 10 P.M. of 9th July; stopped for an hour, at 9 A.M., at Leave Bhudruck. Kendarparah Bungalow, and arrived at Balasore at 1 P.M. of Reach Balasore. the 10th July.

At Balasore I visited the Jail, and went over the station and through all the bazaars. I received ready assistance from Mr. T. F. Bignold, the Magistrate and Collector; from Mr. Pawsey, the Officiating Joint Magistrate and Deputy Collector; and from Dr. J. Davies, the Civil Medical Officer.

Visit the Jail, Station, and Bazaars. I found that from the 28th March to the 9th July, 191 deaths from cholera had been reported in the Balasore District. From the 1st January to 10th July, 1868, twenty-four cholera patients had been admitted in the Balasore Pilgrim Hospital; of these, 8 had been cured, 12 had died, and 4 remained. There were no admissions from 5th to 10th July. The first case noted in the Hospital Register occurred on March 29th, in the person of a pilgrim named "Shib Raoot," proceeding to Pooree. The following Table is instructive, as shewing the direction in which the pilgrims were passing who were seized with cholera:—

Statement shewing the number of Cholera Patients admitted in the Balasore Pilgrim Hospital, from 1st to 10th July, 1868.

Date.	Name.	Sex.	From where.	Result.
March 29th ...	Shib Raoot	Male	Going to Pooree	Died on 30th March, 1868.
" 30th ...	Dhurma Bara	Ditto	Villager	Cured on 31st "
April 3rd ...	Muddun Paysah	Ditto	From Cuttack to Calcutta	Died on 4th April, "
" 8th ...	Chow Jenna	Ditto	Calcutta to Bhudruck	Ditto 9th "
May 19th ...	Narain	Ditto	Calcutta to Aukoorah Pergunnah	Ditto 21st May, "
June 11th ...	Narain	Ditto	Beerbhoom to Pooree	Ditto 13th June, "
" 17th ...	Mookta Bengalli	Female	Pooree to Beerbhoom	Ditto 18th "
" 18th ...	Koylas	Ditto	Bancoorah to Pooree	Cured on 27th "
" 19th ...	Tara	Ditto	Midnapore to Pooree	Ditto on 27th "
" 19th ...	Ooreelal	Male	Pooree to Cawnpore	Ditto on 30th "
" 19th ...	Lalmoney	Female	Unknown	Died on 19th "
" 19th ...	Rajkoomaree	Ditto	Beerbhoom to Pooree	Ditto on 26th "
" 22nd ...	Bhogobotee	Ditto	Pooree to Bogra	Ditto on 24th "
" 22nd ...	Shama	Ditto	Bancoorah to Pooree	Cured on 7th July, "
" 23rd ...	Shonikhila	Male	Villager	Ditto 27th June, "
" 26th ...	Rookoonee	Female	Bancoorah to Pooree	Died on 7th July, "
July 1st ...	Ooreelal	Male	From Pooree	Remaining.
" 2nd ...	Dhoa	Female	Ditto	Cured on 7th July, "
" 4th ...	Niohi Koormee	Male	Ditto	Remaining.
" 4th ...	Horo	Female	Ditto	Ditto.
" 4th ...	Pectum	Ditto	Ditto	Ditto.
" 4th ...	Chundro	Ditto	Ditto	Died on 5th July, "
" 4th ...	Chundro	Ditto	Ditto	Cured on 7th Ditto.
" 5th ...	Bore	Male	Ditto	Died on 6th Ditto.

Leave Balasore.
Reach Jelasore.

I left Balasore on the night of 11th July, and reached Jelasore next day at noon.

Six *coss* to the south of Jelasore I saw a party of pilgrims who had left Pooree twelve days before. They looked very wearied, and they were resting by a ferry.

It may be well here to record a few observations regarding the state in which I saw the pilgrims, as they were *journeying back* to their homes, through the entire length of Orissa. This is a subject which has often been pictured in books; its realities are very impressive.

Remarks regarding the condition of pilgrims on the road between Pooree and Jelasore.

The Revd. A. F. Laeroix's description of the pilgrim's return trip from Pooree is graphic and unexaggerated. I cannot do better than quote from it (*Op. cit.*, pp. 408-9):—

“Weakened by their long stay at Pooree and its many miseries, the rainy season already begun, the roads in a bad state, their previous excitement all fled, their little stock of money greatly reduced, the pilgrims gather themselves again into their little companies and start for home. Being anxious to proceed, they travel very long stages every day, and often walk on till they drop from sheer fatigue. For instance, the foremost body of *jātrīs* reached Bhudruck this year on the *fourth* day after the Roth, having travelled at the rate of 40 miles a day. It is not an uninteresting sight to see them walking along the road on a fine morning. They form a continuous stream for many miles; men and women, the strong and the feeble, thousands on thousands in number, all pressing on together. But they are no longer light-handed. Almost every one carries a basket, containing not only their *ghoti* and their clothes, but a large quantity of the sacred *prosād*. These baskets are a heavy burden to the poor women: and so great is the quantity taken away from Pooree, that hundreds of ‘bearers’ are employed along the whole line of road to carry it.

“Many bullock-carts mingle with the throng, belonging chiefly to Hindustāni pilgrims from up the country. Many of the pilgrims carry an umbrella, having little Pooree eanes fastened beneath it, but many only possess a ‘*sársí*,’ a kind of large cap made of palm-leaves and falling down the back. And thus they trudge on, as strength and health allow, day after day, till they reach their own homes.”

The same author's account of the condition of the pilgrims by night is also worthy of record. It runs thus:—

“But, interesting as these masses of travellers appear by day, their misery is still more apparent at night. Travelling in such large numbers, no sooner do they arrive in a village or bazaar than all the lodging-houses are immediately filled, and by far the greater number have to pass the night in the open air. This fact is often aggravated by a scarcity of food in the bazaars, so that, while willing to purchase necessities, there are none to be sold. Mr. Bachelor informed us that some years ago, 20,000 pilgrims arrived at Balasore between sunrise and sunset in one day. The Dhormosálá and the soráis were filled at once, and the whole bazaar was perfectly blocked up. The wretchedness of the pilgrims under such circumstances was extreme. Often were we witnesses of the miserable way in which they sleep: they might be

seen in the verandahs of the huts, the soráis, in the middle of the road, among the bullocks and carts ; in long lines, in all sorts of positions ; some sitting, some lying, with their heads on their bundles ; also on the wet grass, under the trees ; upon *all* the bridges, whose dry sloping sides seemed in especial request ; no place was too dreary, too comfortless to prove a temporary abode."

The Revd. Mr. Mullens alludes to similar scenes in the following words :—

" While thus sleeping under the open sky in dense crowds, it is well if the night proves fine and dry ; but when, as often occurs, heavy rain falls, it aggravates their misery beyond all calculation. It is useless to rise and go away. Where can they go to ? Every house is full, and without there is no shelter. Hence they lie still, and are soaked to the skin in a few minutes ; their hair mixes with the mud in which they lie, and they await the morning to continue their dismal journey. But alas ! many of them rise no more. These are then left without commiseration by their companions to die, forsaken and alone, at the road-side."

The above descriptions, I believe, fairly represent what usually happens on the Orissa high roads, shortly after times of festival at Pooree.

This year, I am happy to say, that, on the whole, less cholera prevailed than is usual ; and consequently mortality was not great, as compared with that of previous years. Yet where crowds of pilgrims are, scenes of misery are beheld which can never be forgotten. Poverty, exposure, fatigue, sickness, and death—these are the usual concomitants of pilgrimage. The poor votaries of Juggernaut toil on, with bruised and bleeding feet, scantily clothed with dirty rags, direly in want of money, suffering in very many cases from hæmorrhagic dysentery, and positively tottering under the influences of prolonged physical fatigue and mental anxiety. Almost all of them are suffering from disease of one sort or another. At one time, elated by the thought that they have done what is right, and that Juggernaut is kind, and thinking of that shrine where their penitence has been of especial virtue, the burden of their misery weighs comparatively light upon them. But again, wearied with the perpetual march, in want of a frugal meal, reduced to a state of great weakness, their sensibilities dead to all around them, groaning, they cast themselves down beneath the shady boughs of some friendly peepul tree, and lie there, until they again awake, to brave misfortune as before. This goes on time after time. They are soaked by heavy rains and then exhausted by scorching heat ; their bodies become more and more attenuated ; their companions and relatives fall away and are lost sight of ; they are past caring for such things. The only spark of feeling left is the flickering in their hearts of an inextinguishable religious fervor. They appear for a short time longer, positively like apparitions on the road. At last the hour of their deliverance comes, and they sink down by the way, and expire friendless, unregarded, and uncared for. Whilst nature is feebly struggling with death, jackals and vultures eagerly surround their prey. A few hours more, and nothing but a few scattered dry bones are there, and a small white skull. Such is the profoundly melancholy but common story of the votary of Hindooism as he yields his life in the cause of pilgrimage.

Were an inquest held on such bodies, what would it shew ? So far as its social significance is concerned, the following fact recorded by Dr. Mouat (and which has been confirmed a thousand times) furnishes us with the simple answer to this question :—

“The Native Doctor at the Charitable Hospital of Balasore, which is close to the main road, told me that on most of those who died from diarrhœa and dysentery on their return journey, *a few pice*” (a farthing or two) “was all that was found to carry them many hundred miles to Benares and places far more distant in the North-West.”

Leaving Jelasore at 6 P.M. of the 12th July, and being detained for two hours at	Narainghur, I reached Midnapore at 11 A.M. of Monday, the
Leave Jelasore.	13th July, and was kindly received by the Magistrate, Mr. H.
Reach Midnapore.	J. Reynolds. I visited the jail and dispensary, and saw the
	station.

Mr. T. H. Shortt, the Joint Magistrate, took much trouble in trying to collect for me the recent statistics regarding cholera in the Midnapore district. They were only to be found in the usual desultory and scattered form in which they appear in the daily Police Returns. It is no slight task to eliminate precise abstracts of scientific truth from such vague and ill-defined sources of information. Even with Mr. Shortt's kind assistance I could only arrive at the following results :—

At Dantoon, from 11th March to 20th April, 81 attacks of cholera were reported, with 62 deaths.

At Keshpore, from 5th February to 8th April, about 40 deaths occurred.

At Subbung, from 20th February to 2nd April, 28 deaths were reported.

At Seersa, 2 deaths were reported on 11th February, and 1 four days later.

At Debrah, from 5th March to 6th June, there were 7 or 8 deaths.

At Narainghur, on 27th March, 5 deaths.

At Gurbettah, on 6th April, 3 fatal cases.

At Salburin, on 16th and 18th May, 2 deaths.

At Chundra, on 6th June, 1 death.

At Nargole, on 24th June, 8 seizures, with 4 deaths.

At Mooneghur, on 7th July, 1 fatal case.

Lastly, at Midnapore itself, from 3rd to 9th April, 32 attacks with 31 deaths.

The value of these records (vague though they be) lies in the fact of their proving that pilgrims, *on their way to Pooree*, encountered cholera in the Midnapore district, if not before. This in itself is worthy of record. I hope yet to obtain more precise information on the subject ; and shall be glad if Dr. Allen, Civil Surgeon of Midnapore, will go into

it more deeply. He is situated, as it were, at one of the gates of Orissa, and consequently all exact information regarding cholera amongst pilgrims at Midnapore is of especial interest.

I left Midnapore at 6 P.M. of the 14th July, arrived at Ooliberriah at 1 P.M. of the	15th, left it two hours later in a boat, and reached Calcutta
Leave Midnapore.	at 8 P.M. of the 15th July,—after an absence of thirty-five
Reach Calcutta.	days.

PART III.

REGARDING A POOREE LODGING-HOUSE BILL.

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REGARDING A POOREE LODGING-HOUSE BILL.

A Bill “for the better regulation of lodging-houses at Pooree” was brought before the Lieutenant-Governor’s Council (Legislative Department) on the 15th December, 1866.

This is generally known as *Mr. Prinsep’s Bill*. It was referred to a Select Committee of the Council, who produced, as an amendment, an entirely new Bill, much shorter than the first, and consequently not so comprehensive. This amendment, which was produced between December 1866 and March 1867, is, I believe, generally known as *Mr. Schalch’s Bill*.

It makes no mention of conservancy, of infectious diseases, or of water-supply. It does not require the licensing of lodging-houses. It is simply directed against overcrowding. Mr. Prinsep’s Bill appears to me greatly preferable to Mr. Schalch’s, and also to the Sarai Act. It is not exactly all that could be desired; but Mr. Raban, in his Report on Pooree, addressed to the Commissioner of Cuttack (No. 93T., dated 19th February, 1868), has carefully reviewed Mr. Prinsep’s Bill, and has proposed certain well-judged corrections and additions.

These for the most part consist of the following :—

1. An addition regarding the appointment of a Health Officer.

2. A section providing that a lodging-house keeper shall be punishable if he receive a *single lodger* into an unlicensed house; and that a penalty should attach to this offence for each night during which such lodger should be so accommodated.

3. The substitution of a single section, in lieu of Sections 3 and 4 of Mr. Prinsep’s Bill; with the important addition that applications made for licenses shall specify the *number of apartments* in any house in which the owner is desirous of receiving lodgers; with the specification, *in the license, of the number of apartments* so licensed, and the *exact number of lodgers* which *each* is so licensed to accommodate.

4. A substitution for Section 5, providing that the licensing of each house or apartment shall be based on the judgment and certificate of the Health Officer.

5. The insertion, after Section 7 of Mr. Prinsep's Bill, of a new section, providing that, on the strength of the Health Officer's certificate, a license may be suspended for any length of time that may, on professional grounds, appear necessary to the Health Officer. This is a modification of Section 19 of Mr. Prinsep's Bill.

6. An alteration of Section 8 :

1st. Rendering it lawful for the Magistrate, the Health Officer, or any person specially authorized by them, to enter and inspect, at any time, any part of any lodging-house, provided such accommodation is not occupied by women.

2nd. Restricting the powers of the Police in this respect, as laid down in Section 8 of Mr. Prinsep's Bill.

3rd. Nullifying the section which authorizes a muster of all the occupants of a lodging-house.

7. Cancelling Section 9 of Mr. Prinsep's Bill ; leaving Section 273 of the Penal Code to meet the necessities of the case regarding the sale of "holy food."

8. A proposal that it should be lawful for the Magistrate to exempt from inspection the premises occupied by any lodger or lodgers.

9. The addition of *Hindee* to the list of languages in which the entries on the boards in front of the lodging-houses should be set forth.

10. A proposal that "sums received as fees and penalties" under the Act might well be expended on measures for preserving the health of the pilgrims.

Two points on which I feel somewhat inclined to differ with Mr. Raban are these :

1st. Regarding the powers of the Police Officials in entering lodging-houses.

2nd. Regarding the exemption from inspection of houses occupied by Rajahs or other wealthy persons.

I am not sure that the District Superintendent of Police, or, in his absence, the Assistant-Superintendent, should not be possessed of the legal right of entering lodging-houses, with a view to pointing out their defects to the Magistrate or to the Health Officer.

Again, I almost feel inclined to recommend that *no* house in Pooree should, under any circumstances, be exempt from regulated sanitary inspection. It appears questionable whether any persons, because they are rich, should be beyond the influence of the Act.

I have talked carefully with Mr. Raban regarding these two points, and, after all, I am prepared to yield my judgment to his in such matters ; particularly as he believes that the Act would work well as he has put it.

Considering Mr. Prinsep's Bill, and the modifications suggested by Mr. Raban, it remains for me to point out to the Government, how far, in my judgment, it would be advisable to alter the original.

There are certainly a few points of detail which seem to have escaped Mr. Prinsep's attention. They have, for the most part, been touched on by Mr. Raban, whose suggestions are most judicious, and these have been (with the assistance of a friend, a learned member of the Calcutta Bar) embodied in the following Draft Bill, which I venture to think is well suited to meet the requirements of Pooree, with reference to the regulation of its lodging-houses :—

- (a) It will be observed that slight alterations have been made in the wording of the "preamble," of the "interpretation," and of the "definitions."
- (b) A new section has been introduced regarding the appointment of a Health Officer, and the definition of his duties.
- (c) The Act provides for the licensing of every lodging-house, and even of every room in such lodging-house; the proper number of inmates to be determined by the judgment of the Health Officer.
- (d) Applications for licenses to be on stamped paper, and according to a given form; the applicant to be punishable if he makes any false or unfounded statement of fact.
- (e) A license fee to be paid according to the number of lodgers.
- (f) Licenses to be issued for the term of one year.
- (g) The Health Officer to report, if necessary, on the sanitary state and condition of any lodging-houses.
- (h) No licenses to be granted, except on the advice and certificate of the Health Officer, as to the fitness of houses for habitation, and as to their having sufficient space, suitable privy accommodation, and a good water-supply within reasonable distance.
- (i) Any lodging-house to be vacated and closed, on such a measure being reported necessary by the Health Officer, on account of the prevalence of any communicable disease.
- (j) Licensed houses to be subject at any time to careful inspection by the Magistrate or the Health Officer, or by persons formally deputed by them for such duty.
- (k) Licenses to be suspended, if necessary, by the Magistrate on account of the existence of communicable disease, certified to by the Health Officer, or of conditions opposed to the spirit of the Act.
- (l) All births and deaths occurring in lodging-houses to be reported without delay by the owners of such houses at the nearest Police Station; the same to hold good as regards grave accidents, or as regards persons suffering from serious sickness, of whatever sort.

- (m) The Magistrate by the Act could, at any time, call for a report in writing, showing the names of all persons who had been inmates of any particular lodging-house during the preceding night.
- (n) Lodging-house keepers to be obliged at any time to show their licenses, and to be subject to penalties for infringement of any of the provisions of the Act.
- (o) Fines to be levied in accordance with the terms of the Penal Code.
- (p) All offences against the Act to be determined according to the provisions of the Code of Criminal Procedure.
- (q) All fines and fees recoverable under the Act to be expended on the sanitary improvement of Pooree.
- (r) The provisions of the Act to be extended, at any time, if need be, to Bhobanessur and Jajipore.

The Bill in its present proposed form would run as follows. (The substance of Mr. Prinsep's Bill appears in Roman type; the suggested alterations being in *italics*) :—

A

BILL

FOR

The better regulation of Lodging-houses at Pooree.

WHEREAS it is expedient *to make provision for the licensing and regulation of lodging-houses at Pooree, and for the appointment of a Health Officer to control the sanitation and conservancy thereof*: It is enacted as follows:—

I. The words and expressions following shall, in this Act, have *and bear* the meanings *and construction* hereby assigned to them, unless there be something in the subject or context repugnant to such *meaning or construction*; that is to say:—

" Inmate."	The word "Inmate" shall mean a person passing the night in any house.
" Lodger."	The word "Lodger" shall mean an inmate <i>liable to pay</i> hire for accommodation in any house.
" Owner."	The word "Owner" shall mean the person entitled to the immediate possession of any house.
" Lodging-house."	The expression "Lodging-house" shall mean a house licensed under this Act for the reception of lodgers.
" Keeper of a lodging-house."	The expression "Keeper of a lodging-house" shall mean <i>the person to whom a license for the reception of lodgers in any house</i> under this Act shall be granted.

"The Magistrate."

The expression "The Magistrate" shall mean the Magistrate for the district of Pooree, or other officer in charge of the office of such Magistrate.

"The Health Officer."

The expression "The Health Officer" shall mean the person whom the Lieutenant-Governor of Bengal shall appoint under this Act.

Number.

Words importing the singular number shall include the plural number, and words importing the plural number shall include the singular number. Words importing the masculine gender shall include the feminine.

Gender.

II. *The Lieutenant-Governor of Bengal is hereby empowered to appoint a Health Officer to control and direct the sanitation and conservancy of the town of Pooree, and, save in so far as is provided for in this Act, by a notification to be published in the "Calcutta Gazette," to declare and define the powers which shall be vested in and exercised by such Health Officer.*

III. *From and after the passing of this Act, it shall be lawful for the Magistrate, upon the application of the owner of any house in the town of Pooree, to grant to such applicant a license for the reception of lodgers in his said house, if the Magistrate be satisfied that such house is fit to be used as a lodging-house.*

IV. *The application for such license as in the preceding Section is mentioned, shall be in writing, upon paper impressed with a stamp of the value of rupees, and shall be in the form set forth in Schedule A of this Act, and shall be subscribed and verified by the applicant at the foot or end thereof in the manner provided by law for the verification of complaints. And it is hereby further enacted, that if any such application aforesaid shall contain any averment which the applicant shall know or believe to be false, or does not believe to be true, such applicant shall be subject to punishment according to the provisions of the law for the time being in force for the punishment of giving or fabricating false evidence. The license for the reception of lodgers to be granted by the Magistrate under this Act shall be in the form set forth in Schedule B. of this Act.*

IV. A. *The Health Officer shall, when required by the Magistrate or the owner of any house, certify to the Magistrate the sanitary state and condition of such house, and the nature and extent of the accommodation which such house is capable of affording to lodgers.*

V. *No license for the reception of lodgers shall be granted under this Act by the Magistrate, unless the Health Officer shall certify in writing under his hand to the Magistrate that in his judgment the house, for the licensing of which for the reception of lodgers application shall have been made as aforesaid, is sufficiently ventilated, and has a sufficient*

supply of water fit for human consumption, and also sufficient privy accommodation within a reasonable distance from such house, and is otherwise fit for the reception of lodgers. The said Health Officer shall also certify to the Magistrate the largest number of lodgers which such house can, having regard to the number of inmates residing therein, accommodate with safety to the health of such lodgers, and no license under this Act shall be granted by the Magistrate for the reception in any house of any number of lodgers in excess of the number of lodgers which the Health Officer shall have so certified as aforesaid to be the largest number which such house could accommodate with safety to the health of such lodgers.

VI. After the passing of this Act, every owner of any house in the town of Pooree not

licensed as a lodging-house under this Act, who shall suffer
 A fine to be imposed on any lodging-house keeper not taking out a license. or permit any lodger to be an inmate of such house, shall be punished by a fine not exceeding Rs. for each night during any part of which any such lodger shall be an inmate of such house for every such offence.

VII. There shall be charged upon every certificate of the Health Officer, issued

upon the application therefor by the owner of any house, a fee of Rs. ; and upon every license, a fee calculated upon the entire number of lodgers, for the reception of whom such license shall be granted, at the rate of Rs. for each such lodger.

VIII. Every license under this Act shall, unless revoked or suspended, continue and

be in force until the end of the current English year in which it shall have been granted.
 License to continue for a year.

IX. If the Health Officer shall certify in writing under his hand that any lodging-

house is, by reason of the occurrence therein, or in the immediate neighbourhood thereof, of cholera, small-pox, or any infectious or contagious disease, unsafe for human habitation, or if the Magistrate, after due enquiry, shall consider that for any other reason any lodging-house has become unfit for human habitation, it shall be lawful for the Magistrate either wholly to revoke, or for a time to suspend, the license held by the keeper of such lodging-house.

X. It shall be lawful, without the consent of the occupier or owner thereof, for the

Magistrate or the Health Officer, or for any person whom the Magistrate or the Health Officer shall by any writing thereunto authorize, at any reasonable time to enter into any lodging-house, and to inspect and examine the same and every part thereof, not being in the exclusive use and occupation of women, who, according to the custom and manners of the country, ought not to be compelled to appear in public: provided always that if, in the judgment of the Magistrate, such reason shall exist as to necessitate an entry into and inspection and examination of such apartments so exclusively used and occupied by such women as aforesaid, it shall be lawful for the Magistrate, upon reasonable notice of such his intention being affixed to the house in which such women

are residing, to enter into and inspect and examine, or to authorize under his hand any other person to enter into and inspect and examine, such apartments of such women as aforesaid.

XI. It shall be lawful for the Magistrate to exempt from inspection the premises occupied by any lodger, so long as they shall be occupied by such lodger, or until further order by the Magistrate.

Power to exempt lodging-house from inspection.

XII. Every keeper of a lodging-house shall produce to the Magistrate the license of such house, whenever he shall be thereunto required by the Magistrate.

Keeper of lodging-house to produce his license.

XIII. Every keeper of a lodging-house shall make a report to the person in charge of the nearest Police Station, of each birth, death, or grave accident, or sudden and serious sickness which may occur in the lodging-house of which he is keeper, as soon as conveniently may be after such birth, death, or accident or sickness shall have occurred; and shall also, every day during such periods of the year as the Magistrate shall from time to time appoint, before noon, make a report in writing to the person in charge of such station, stating the names of all persons who shall have been inmates of such lodging-house during the preceding night, and shall also make a like report to the Health Officer of any diminution or cessation of the water-supply or privy accommodation of any lodging-house of which he is a keeper, within 24 hours after such diminution or cessation shall have occurred.

Keeper of lodging-houses to report accidents, deaths, and sickness, and the names of persons in their lodging-houses.

XIV. Every keeper of a lodging-house shall exhibit, and keep exhibited on a conspicuous portion of the front of such house, the number of the license of such house, and the number of lodgers which such person is licensed to accommodate, plainly and legibly set forth in English, Bengalee, Hindlee, and Ooriah characters.

Lodging-house keepers to exhibit number of house.

XV. Upon the inspection and examination of any lodging-house, the Magistrate or Health Officer, or the person who may have been authorized by them, or either of them, to make such inspection and examination, shall record in a Register Book to be kept for that purpose, a succinct report of the result of such inspection and examination.

A short report to be kept of the inspection and examination of any lodging-house.

XVI. Every person who shall make any application, statement, or report, in pursuance of the provisions of this Act, shall be deemed to have been bound by express provision of law to state the truth therein.

Statement under this Act to be true.

XVII. Every keeper of a lodging-house in which there shall be, at any time, a number of inmates in excess of the aggregate number of inmates resident in such house at the date of the application for the license thereof, and of the number of lodgers for the reception of whom the license thereof shall have been granted, or may have been reduced, as hereinafter mentioned, or who shall suffer or permit any person, other than a member of his family or a servant in his actual employ, to be an inmate of his house after the revocation or during the suspension of his license, or who shall omit to give the Magistrate notice in writing of the determination of any exemption of his house from the provisions of Section 10 of this Act within 24 hours after the

Penalty.

exemption shall have determined, or who shall omit to give like notice in writing to the Health Officer of any diminution or cessation of the water-supply or privy accommodation of his house within 24 hours after such diminution or cessation shall have occurred, or who shall refuse or neglect without reasonable cause, within one hour after demand, to produce to the Magistrate the license for his said lodging-house when he shall be thereunto required, or who shall omit, without like reasonable cause, to make such report as by Section 13 of this Act he is required to make, or to expose or keep exposed the number of his license, and of the number of lodgers he is licensed to accommodate as hereinbefore is required, shall be liable to be punished by a fine not exceeding one hundred rupees for every such offence.

XVIII. Whenever the keeper of any lodging-house shall not be actually in charge thereof, then the person who shall be actually in charge thereof shall, as well as the keeper thereof, be liable to the penalties hereby provided for any infraction of the provisions of this Act.

XIX. The provisions of the Indian Penal Code, Sections 64, 67, 68, 69, and 70, shall apply to all fines for the imposition of which authority is by this Act given; and this Act shall be read as if the same Sections had been re-enacted herein.

XX. All offences against this Act shall be heard and determined according to the provisions of the Code of Criminal Procedure.

XXI. It shall be lawful for the Magistrate to revoke or suspend any license granted under this Act to the keeper of any lodging-house who, after the grant of such license, shall have been convicted of any offence against the provisions of this Act.

XXII. It shall be lawful for the Magistrate, upon proof that the water-supply or privy accommodation of any lodging-house has been diminished after the grant of the license of such house, to reduce the number of lodgers, for the reception of which such house may be licensed, to such number as may be able to obtain suitable water-supply and privy accommodation within a reasonable distance thereof, and to enter in the license of such house such diminished number.

XXIII. All fines, fees, and stamp duties, paid or levied under this Act, shall be applied for and towards the sanitary improvement of the town of Pooree, in such manner as the Lieutenant-Governor of Bengal may from time to time, by notification in the "Calcutta Gazette," direct.

XXIV. All applications to the Magistrate or Health Officer under this Act shall be made in writing, upon paper impressed with a stamp of the value of one rupee.

XXV. It shall be lawful for the Lieutenant-Governor of Bengal, at any time by notification in the "Calcutta Gazette," to extend the provisions of this Act to Bhobanessur or to Jajipore.

Schedule A.

APPLICATION FOR LICENSE.

I, _____, the owner of house No. _____, in the town of Pooree, hereby request that a license may be granted to me, under the provisions of Act No. _____ of the Council of the Lieutenant-Governor of Bengal for making laws and regulations, for the reception of lodgers in my said house.

1	2	3	4	5	6	7
Name of the street in which the house is situated, or other sufficient description of its locality.	Name of owner applying for license.	Whether sole owner of house or not.	Whether applicant has been previously convicted of any offence against provisions of this Act, or not.	Number of lodgers applicant desires to obtain license for accommodating in his said house.	Number, description, and size of apartments in which applicant desires to accommodate lodgers.	Number of inmates now residing in applicant's said house.

I, _____, above-named, do declare that what is stated on the above application for a license is true, to the best of my information and belief.

(Signature) _____

Schedule B.

LICENSE.

A. B., _____, the owner of house No. _____, in the town of Pooree, is hereby licensed to receive lodgers in his said house in _____ apartments thereof, subject to the provisions of Act No. _____ of the Council of the Lieutenant-Governor of Bengal for making laws and regulations.

The registered number of this license, upon which a fee of Rs. _____ has been paid, is No. _____

(Signature) _____

Magistrate of Pooree District.

Such is the Bill which, I think, would best meet the sanitary requirements of the town of Pooree.

It is, however, a matter of prime importance that the questions involved in the following passage of Mr. Raban's Report should be considered with great care by the Government :—

“ Whatever measures we adopt, it will be necessary to proceed at first with great caution and moderation, feeling our way as we proceed. The pilgrims, if driven out of the houses by much interference, are likely to suffer much more from damp and exposure than from overcrowding.”

Here we are brought face to face with a very serious difficulty. If the occupants of lodging-houses throughout the town are “thinned out” (in plain English, summarily turned out) by the provisions of a Lodging-house Bill, where, it may reasonably be asked, will such persons be able to find accommodation? It may be answered,—in a camp or camps formed outside the town.

I have, however, already endeavoured to show that the proposal to have large encampments at Pooree is not unattended with very considerable difficulties, and that it certainly must entail a large expenditure of money. Dr. Mouat writes:—“Pooree is never free from pilgrims, but in the intervals of the chief *Jātras*, the ordinary accommodation of the town, even when properly regulated as to space, will be ample for those who go to worship at the shrines.” It is during the chief festivals—the Ruth, the Snân, the Dole, and the Punchuck—that the difficulty will present itself. I have already given, approximately, the number of houses in Pooree, and have indicated, as far as possible, the average number of pilgrims assembling in the town, so that an idea can be formed of the relation of these facts to each other.

In conversing with Mr. Raban on this subject, I found that he was of opinion that “circumstances would adapt themselves” to the provisions of the Bill, if it were only introduced with caution and moderation. Thus, if the fact of the introduction of the Lodging-house Bill were made generally known throughout the country, it is possible that pilgrims, from fear of not being accommodated on their arrival at Pooree, might cease to come in such numbers as they have heretofore done. Again, the *Mut'hdars* would probably take in more persons into the *Mut'hs* than obtains at present. There is, I believe, at certain times, in some of these establishments, considerable accommodation which is not made use of. Lastly, lodging-house keepers themselves, knowing the restrictions placed on them by the Act, would invite fewer persons to come to their houses, and they would also hasten the departure of those dwelling in their establishments, that they might make room for new arrivals.

In these ways the immediate difficulties presented by the introduction and enforcing of the Act would doubtless be counteracted to a certain degree. Yet I cannot help thinking that the Government should, before introducing such an Act, anxiously consider all its possible consequences. In the abstract, there is not room for a doubt as to the expediency of having some such Act to regulate the general conditions of salubrity in the town of Pooree. The difficulty lies in so working such a Bill that pilgrims shall not be rendered houseless, and that they shall not otherwise be subjected to serious hardships.

PART IV.

REMARKS ON THE MANNER IN WHICH PILGRIMS ARE
TREATED BY PRIESTS AND PUNDAHS.

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It has often been asserted that much deceit and oppression is practised, towards the pilgrims, by the pundahs and priests of the temple.

The "pilgrim-hunters" are said to inveigle the devotees from their homes, to deceive them on the way, to treat them in a heartless and cruel manner, and to take advantage of their ignorance and credulity. The work which those hireling parasites commence, the pundahs and priests of Pooree are said to complete. Deceit, hypocrisy, cunning, falsehood, cruelty, cupidity, and sensual depravity have often been adduced as the characteristics of these functionaries. Their chief object, it is said, is to absorb the hard-earned gains of the devotee, and for this purpose grasping selfishness and deep chicanery are had recourse to. In the secrecy of temples, and in the recesses of so-called holy places, the poor are said to be plundered, under every variety of ignoble pretext. If we may believe one-half of what we hear, pilgrims are in every way the sport of heartless and lewd impostors.

My object, I would have it understood, is by no means to denounce the religion of the people, or to launch invectives against their simple and, as I believe, sincere belief. But it seems unnecessary to extend lenity towards those whose artifice, treachery, crime, and cruelty I believe to be the root and origin of very many of the miseries which the pilgrims endure both at Pooree and after leaving it. Consideration is out of place for those who shrink not from robbing the poor, outraging simple innocence, and profaning holy places. The day will doubtless come when the impious deeds of those guardians of Hindoo sanctuaries will be brought fully to the light. It is not, and I believe never will be, for the Government to do this. But influential, intelligent, and humane Hindoos (leaders in society) might well exert themselves in such a cause. They might well come to the protection of the poor, and loosen the grasp of their oppressors. They might have recourse to measures whereby the machinations of those would be restrained who simply sport with the life, the property, and the happiness of the people.

If I have here written anything that can fairly be considered ungenerous, uncatholic, or not absolutely and strictly correct, I should desire at once fully to retract it. But I do believe it to be well nigh impossible to exaggerate the enormity of those offences which at Juggernaut, and elsewhere, are practised in the name of religion. Every true-hearted man

must experience feelings of sadness and indignation when he thinks of the utter want of compassion with which the simple people of Orissa and Bengal are ruined, year by year. It requires a vastly stronger pen than mine fitly to deal with such a subject. In the cause, however, of truth, justice, and benevolence, I simply point to the atrocious barbarities which are said to be committed, day by day, with the utmost callousness, in connection with the rites of Juggernaut-worship. I fear Laurie spoke with a certain degree of truth when he alluded to the temples of Orissa as "vile nests of iniquity."

It has been remarked that poor pilgrims "can never come away from Pooree with a rupee, a pice, a cloth, or a *lota*." Certain it is that, after being reduced to indigence, by giving more than they can afford in the temple, they are often persuaded to avail themselves of loans of money, offered to them by the priests of the temple, at ruinous rates of interest; and it is a well-known fact that the lenders never fail fully to realize such bonds.

But, after all, the root of much, if not of all the pilgrim's misery doubtless lies in his want of enlightenment and ignorance. "*Primus sapientiæ gradus falsa intelligere.*" That it may not be supposed that I have written in an impulsive and prejudiced spirit regarding the pundahs and priests of Juggernaut, I desire to lay before the Government the following account of pilgrimage in Orissa, written by a Native. The article appeared in a Native paper—the *Shom Prokash*, of the 8th May, 1868.

A literal translation of it runs thus:—

A TRUE ACCOUNT OF THE PILGRIMAGE TO POOREE.

(*Correspondent's letter.*)

"In consequence of the fearful famine, pilgrimage to Pooree ceased for two years. The intelligence that thousands of people were dying of starvation, and that no eatables were procurable on the way, dried up the waters of piety. Many were determined to go last year, but on account of the warning issued by the Government they could not undertake the journey. The wishes of the Government were not prohibitive, but the Police and Zillah Magistrates exceeded their powers, and turned back hundreds of misguided people from Oolooberiah. No one complained of that treatment—nay, many were pleased at it. But all such reasons do not exist this year. The attractive power of Juggernaut, which the famine had dispersed, has now revived, and his priests, who, with eyes closed, managed to keep their bodies and souls together with the remnants of former offerings, are again looking lively. In fact, the rice exported to Orissa, which was purchased with 25 lacs of rupees from the Government coffers, has, in a manner, contributed to the revival of Juggernaut's glory and that of his priests. Multitudes of females, again, have felt Juggernaut's strings pulling them by the shoulders. In truth, many unfortunate women have cast away infant children from their own breasts, and preferred the pundah's abuse, the scorching heat of the sun, rice like the Indian corn, and the cholera.

"Quite in keeping with the comely look of Juggernaut, his service, and the offerings made to him, are the Pooree pundahs! I bear antipathy to no sect. I respect the man

who, whatever his religion may be, believes in that religion, in sincerity. But, I am free to confess, my blood boils to look at those demi-devils who, with heads shaved, half-bald, and wearing caps that cover their ears (their foreheads being painted in the form of the half-moon), hold an umbrella of *golepatta* in one hand; who, clad in a semi-*chupkan* of Madras cloth, and incessantly chewing *pán*, bend forward under the weight of the knapsacks which they carry on their backs, and trudge about from the month of Choitro to the middle of Joisto, from one village to another. Brutes in manners, clowns in education, and fools in conversation, their mouths are full of the praises of Juggernaut, while in their hearts they regard none of his rules. They visit houses at an hour when their male inmates have gone out on business, and then they commence to "gull" the females. Some of these are induced to leave their homes from superstitious motives, others with a view to break the shackles of the *zenana*, and breathe the air of liberty; while young widows make a plea of pilgrimage to satisfy their carnal desires. The pundahs, adepts in their trade, pander to all sorts of motives and wishes of the pilgrims. Truth must be told. To keep silence, when mischief is perpetrated before our very eyes, is surely not proper. I ask my countrymen if Juggernaut does not attract to his shrine only females? Have males been observed to constitute even 5 per cent. of the pilgrims? The men have no faith in Juggernaut, neither does Juggernaut attract the men. There is good reason for this. With a larger proportion of male pilgrims, the earnings, as also the influence of the pundahs, would be on the wane.

"I doubt if all that transpires on the road to Pooree is well known to the reader. The pundahs are all attention to the pilgrims down as far as Oolooberiah, which place they no sooner leave than they assume quite a different mien. By nature they possess frames hard as iron. They travel regularly 40 miles a day, which it is beyond the power of females to do for 16 or 17 days together. But those wretches must needs drag them on. At night the pundah sleeps amongst the females. He is their protecting genius, and should confront danger to keep them from harm. He, however, tells them—'if one of you should die of snake-bite, or be carried away by a tiger, there would be no great harm done; but should I die, who would take the rest of you on to Juggernaut?' The pilgrims become quite exhausted at the end of the day's journey, but the ruthless guide will not give them rest. He must pick out one or two from amongst them to shampoo him. That a spirit of piety, even after the women have returned from Pooree, should continue to influence many of them long, it is unreasonable to expect. At dawn of day the pundah is ready to resume his journey, and then the pilgrims must leave their beds. The way is dangerous, skirted on both sides by woods infested with beasts of prey. Neither is delay possible. The pilgrims commence to move. The day grows, and the sun showers his poisonous rays (*sic*), when a delicate girl prays of the guide to stop for a few minutes under the shade of yonder tree. The language which the pundah uses to urge the poor creature on is simply too obscene for utterance. Those who have heard bullock-drivers urge forward their beasts of burden, when they succumb on the way, under the weight they are made to carry, can partially realise to themselves the language the pundahs use on occasions like the one alluded to above. At noon the pilgrims halt at a caravanserai. The reader should bear in mind that the eatables at these serais are as inviting as is the idol of Juggernaut! The pundah, upon taking his bath, satisfies his

appetite with anything and everything good that he can find. He does not pray, nor even change his clothes, for three or four days running. This might disgust some sensitive females. But there is no help for it. They have put their feet in the mire and must proceed. The bulk of the pilgrims, however, forgive the pundah's disregard of decency on the principle that 'nothing is evil on the way to Juggernaut.' After the pundah has comforted himself, the females commence to bathe promiscuously with the males in some tank, at a *ghât* scarcely ten cubits broad, and how far they can preserve decency under the circumstances the reader may well conceive. After taking food, the pilgrims resume their journey. If any, in the meantime, should happen to be sick, they must be left behind to look after themselves. Their companions cannot wait, for Juggernaut 'pulls his strings,' which do not admit of delay. Rivers have to be crossed now and then. The boats of Orissa are unusually high, and to provide for safety, in case they should capsize in the strong eddies, a liberal supply of branches of trees is kept upon them; the boats are thus rendered higher, which makes it so much the more difficult for the pilgrims to embark. They must be pulled from above and pushed from below by helping hands. Those who would fly into a rage if an intruding hand dared to touch their wives at home, should know that the former of the two operations mentioned above is done by the *manjees* themselves, while the latter is undertaken by the pundah, who then resembles Basookie supporting the earth! Thus terminates the journey to Pooree. What do the pilgrims witness there? A place of pilgrimage should help to liberate one from sin. Pilgrimage avails nothing if the passions be not curbed thereby, and if the mind be not weaned from all thoughts of earth, to religious contemplation. I ask again what do the pilgrims witness at Pooree? On the car of Juggernaut, in the temple of Juggernaut, on the walls of that temple, wherever they may cast their eyes, they see nothing but obscene representations and images. Thoughts of religion vanish at such sights. Some feel disgusted at them, many lose their sense of modesty, while others, with frail hearts, take encouragement from them to sin. The pilgrims forfeit as much in a pecuniary as in a moral sense. The pundahs, on different pleas, fleece the pilgrims. The pleas they set up are numerous: hoisting of the flag, Rajah's fee, ritual presents, trusts for *atkai* or feeding beggars, &c., requiring from 5 to 50 rupees each. The pilgrims have besides to measure the temple with a long piece of cloth, which costs them 10 rupees each. This ceremony brings to the pundah a whole year's supply of clothes. Thus at every step the pilgrims have to pay heavily, and lest they should, on their return home, relate all the hardships and severe treatment experienced by them, the following precaution is resorted to by the pundahs to gag their mouths. At a certain place a person stands with a broom, the reception of a blow from which is represented to be a great act of piety, and for which the pilgrims have to pay two rupees all round. Before the blow is administered, a promise is enforced from the recipient not to divulge what has transpired, or shall transpire on the way, under penalty of forfeiture of all good acts performed. The women, blinded by superstition, hold their tongues from fear of punishment. At Pooree the pilgrims sleep, just as they eat, promiscuously. In the workhouses of London and Manchester, the poor, male and female, sleep in the same room from necessity; whereas, at Pooree, the wives of Hindoos, even in affluent circumstances, sleep in the same room with perfect strangers of the opposite sex. A scamp residing at Cuttack used to visit Pooree regularly every year, on the plea of Juggernaut's attractions, when his real object was to flirt with the female pilgrims!

“The above is not all. The single stragglers on the way, those that have been forsaken by their companions, meet with the greatest danger. At the Ruth Jattrā, Pooree is visited by *dalals* from Central India, to whom the pundahs sell those unfortunate females. They are told they have been pressed into the Company’s service, but when they pass Jubbulpore, they become awakened to a sense of their real danger—that they are destined to enter a Mussulman *zenana*. The pundahs, unable to resist the temptation, occasionally reserve one or two of such females to live under their own protection. Those that discredit what we have stated may refer to the Report of the Lunatic Asylum of Cuttack for 1866. A female was driven to insanity from being thus confined in the house of a pundah, whence the Police removed her to the Lunatic Asylum of Cuttack. Her revelations, upon her regaining her mind, led to the conviction of the miscreant.

“Such is the misery attending pilgrimage to Pooree—such the misconduct, not to speak of the hardship, in diet and living. How many females meet an untimely death and thereby leave their husbands and children in wretchedness! How many more sacrifice honour, which to a female is more precious than existence, and live a life of misery, self-reproach, and humiliation to themselves, and grief to those who are dear to them! The generation of our elders have lost their strength (*sic*), neither are they advocates for visiting Pooree. I ask those who have gained bitter experience if they will allow their families to visit that place. If we have advanced beyond the mere name of education and civilization, if we have acquired the power to discriminate good from evil, we should close the way to Pooree. We could discontinue the pilgrimage if we chose. The question now is—shall we do it or not? I entreat the Government to restrict this evil practice by instituting the issue of licenses to the pundahs of Juggernaut, as they have done with the Agents of Cooly Emigration. By doing so there can be no possible interference with the religion of the country.”

(Sd.) SREE B.

REMARKS AS TO THE IMPOSSIBILITY OF PROHIBITING INDIAN PILGRIMAGES.

It has been urged by some that Indian pilgrimages should be entirely prohibited by the State. This, to my mind, is an atrocious suggestion. Almost as well might the Government attempt to put a stop to the most cherished and harmless religious services of Hindooism, or to place a veto on persons of different Christian sects visiting their shrines. At a certain stage in the history of every country the spirit of pilgrimage is natural to its inhabitants. It is, in point of fact, the manifestation of such ennobling sensibilities as the people, at that particular period of their civilization, are capable of. However gross may be the superstitions that foster it, there is yet much connected with it that is heroic and creditable to human nature, and with whatever degree of ignorance and error it may be associated, certain it is that, in the name of all that is just and politic, it must be tolerated. The history of the pilgrimages which have, at different periods and in various countries, engaged the thoughts of man, would furnish the material for a great and instructive work. Even the story of celebrated Hindoo shrines alone would be of a profoundly interesting character. I do not know that the study has ever been broadly entered on by any single writer, although a vast

deal of information on the subject is scattered throughout the philosophical and archæological literature of this country. It is no part of my present duty to attempt to furnish such a history, even in outline; yet it appears necessary that I should, in a general way, consider the feelings and inducements that lead the different classes of society in India to enter on pilgrimage, the circumstances that attend their wanderings, the consequences of their massing together on high roads, in camps, and around shrines, the physical results that accrue from the deleterious conditions surrounding them, and the nature of the influences by which they are subjected to disease and death. There is perhaps no country in the world in which devotees have not, at one time or another, wandered to and fro. Indeed, as before remarked, the desire for pilgrimage may fairly be said to be common to humanity. Cicero has beautifully expressed this idea (*De Finibus*, 5-1); one which has been confirmed by Gibbon, by Chateaubriand, by Tasso, and by numberless thoughtful writers since his day, many of whom seem moved to a remarkable enthusiasm at the very thought of pilgrimage. This being the case, how natural and excusable must be the excited feelings of those in whose belief it constitutes one of the most essential parts of religious observance. We can no longer be astonished at the Indian *jatree* experiencing mysterious delight as he wanders to places which to him are sanctified by a thousand domestic and pious associations. The same spirit that still leads the disciples of the Greek, Roman, and Armenian Churches to assemble, at Easter-tide, in the Sanctuary at Jerusalem, impels the Ooriya, the Bengalee, the Brahmin of Benares, the Rajpoot, and the Hindoo of Hazara to undertake willing sojourn to Pooree. The same belief in the virtue of pilgrimage, the same passionate desire to present vows and offerings, the same reverence for distant scenes, the same eagerness to reach localities sanctified by history and tradition, the same readiness to undergo hardships and austere penance, the same disregard of danger and difficulty, the same unquenchable zeal, the same resignation, the same willingness to die in so cherished a cause that warmed the heart of the Crusader in his armour, and the Palmer in his rags, to toil through foreign lands to the sacred spots of Palestine, now leads the Indian pilgrim to the favourite land of Orissa, the holy shrines of Jajipore and Bhubaneswar, to the sacred tanks of Pooree, and to that mysterious cradle of Hindoo faith—the temple of Juggernaut.

Much the same spirit that at different times led pilgrims of different nationalities to Ephesus, Corinth, Dodona, Eleusis, Thebes, Scete, Memphis, Edfu, Rome, Loretto, and Saragossa, influences those who in India wander to Benares, Gya, Allahabad, Hurdwar, Gungootri, and Budrináth.

Longings such as have stimulated millions of the followers of the Prophet to reach the Caaba of Mecca, still attract, as if by magic, the votaries of Brahma to Gunga-Saugor, Brindabund, and Seetabund-Rameswar. The same vague influence animates those who annually reach Conjeveram in the south, or Salsette, Elephanta, and Ellora in the west. As the adherents of Christianity “kiss the sanctified spots, speak the appointed syllables, and lay down the accustomed coin” (*Eothen*, p. 169) in the Terra Santa of Palestine, so do the Hindoos about us pay homage and tribute at many shrines. As Christian pilgrims used to prepare themselves by fasting and prayer before they presented themselves in the Sanctuary, so do the Hindoos perform similar mortifications, humbling themselves in a penitential spirit. As the former bear fondly back with them “double-blessed beads and sanctified shells,” so the latter carry to their homes *moha-pershád* and other valued relics of Pooree.

As Antioch of old was known by the name Theopolis—the city of God—so Juggernaut is the temple of “the Lord of the Universe.”

Thus we see that, in many respects, the pilgrimages of the Hindoos resemble those of Western nations. Nor is it to be supposed that the latter were free from abuses. If I have drawn attention to the alleged machinations and knavery by which the poor are heartlessly spoliated at Juggernaut, it is but fair to remember that matters were, and even still are, conducted in much the same way in Palestine. I adduce the fact simply with the object of strengthening my present argument, that we should be amply tolerant towards Hindooism, and that the Government cannot for a moment think seriously of trying to check Indian pilgrimage—a measure which, in this country, one often hears eagerly advocated. Gibbon tells us that “every species of vice, adultery, theft, idolatry, poisoning, and murder was familiar to the inhabitants of the Holy City.” He also describes the interested and designing zeal, the avarice, the artifices, and the stratagems of the clergy. Michaud (in his “History of the Crusades,” Vol. I., p. 8) writes: “At Antioch, the Christians were seduced by every temptation that nature either prompts or reprobates.” He describes “tumultuous scene of debauchery, pillage, violation, and murder”—telling us that “the most corrupted gained the ascendancy, and bad examples constituted the law.” In another place (p. 73) he writes: “In their blindness they allied superstition with license, and, under the banners of the Cross, committed crimes which make human nature shudder.” We also learn that Christian pilgrims went to distant shrines from love of idleness and change, or from curiosity or vanity. Indeed, these facts were so certain that they drew upon the people the displeasure and indignation of Augustine, Gregory, and Jerome. Even now what do we find? I will allow another to speak for me. The author of the “Crescent and the Cross” writes (p. 246): “It is a marvellous sight, and one to make a spectator thoughtful, to see those rival sectaries (Armenians, Copts, Abyssinians, and Maronites), at Jerusalem, bending over the Tomb whence all their hopes have risen, each setting his miserable yet complicated and intolerant heresy above the grand and general truth, and exalting the bylaws of his sect above the Magna Charta of the soul.” And again (p. 256): “What can be said in defence of those who prostitute the Sacred Mysteries to Mammon—who profane the very Sepulchre with the foulest falsehood and the blackest hypocrisy?”

From the above we see that there is nothing radically obnoxious in the pilgrimages of India (as they are now conducted) for which we cannot find a very close parallel from the experiences of Europe; the simple inference being that toleration is absolutely necessary, particularly now that all inhuman cruelties, barbarous customs, and sanguinary immolations have for ever been put a stop to by the law of the land. “Highly honorable,” writes Peggs, himself a leading missionary in Orissa, “is the determination of the Government not to interfere in the religion of their Indian subjects;” an opinion which will, I believe, be echoed by all who have a real knowledge of the general bearings of the subject. It appears to me justifiable even to go further, and to say that the Government has no right or power to determine what the people shall do, and what they shall not do, in the matter of cherished religious observances, so long as they are not opposed to the “inviolable obligations of justice and humanity.” Lord William Bentinck himself announced this important truth when Suttee was abolished in India (*vide* Preamble to Act XVII of 1829). Better, in my opinion, would it be that India should be devastated by cholera than subjected to

religious persecution. The Hindoo believes pilgrimage to be one of his passports to Heaven. He undertakes it that he may be absolved from sin, and that he may conciliate and appease his offended gods. His belief is that he thereby pleases and gains the love of "a consoling and helpful divinity," and his conduct in all matters of every-day life is regulated by the thought. By the *Shastras* he is enjoined to regard pilgrimage "as a means of securing future happiness." Such a belief is, at least, as sincere, if not as sound, as the expression of what we consider a more enlightened piety. He should be allowed to believe it, and freely to act up to the belief; for, as a truly great modern English writer has said, "if man is bound to form his opinions by his private judgment, if the exercise of private judgment is both a duty and a right, it is absurd to prescribe beforehand the conclusion to which he must arrive, and to brand honest error as criminal." (Lecky on "Rationalism in Europe" Vol. II., p. 60). The truth is, pilgrimage is a custom that can never be fully suppressed by any prohibitive measures. It is an evil, the root of which lies in great national ignorance. If it were abolished to-morrow, its spirit would still live; the only thing that can uproot it being education and general enlightenment. With these remarks, as to the advisability and justice of tolerating pilgrimage, I pass on to the consideration whether or not it is expedient to levy a pilgrim sanitary tax for the express object of mitigating the physical wretchedness attending pilgrimage to Juggernaut.

REMARKS AS TO THE ADVISABILITY OF LEVYING A PILGRIM SANITARY TAX.

In a letter, No. $\frac{5}{3766}$, from E. C. Bayley, Esq., Secretary to the Government of India, to

The Circular Letter of the Govern-
ment of India.

the Officiating Secretary to the Government of Bengal (Home Department), dated Simla, 21st August, 1867, it is stated that

"although nothing is further from the Governor-General's wishes than to interfere in any way with the religious feelings of the people, His Excellency nevertheless thinks that, if it be possible, the people of the country generally should be made aware of the serious risk which they run, and should be dissuaded and discouraged, as far as is practicable, from making pilgrimages, on the ground that they entail largely exposure, disease, and death, and lead often to much demoralization.

"His Honor the Lieutenant-Governor of Bengal is requested, after careful consultation with Native gentlemen of character and intelligence, to favor the Governor-General with an expression of opinion as to what may be practicable in this direction."

The last two paragraphs of the letter alluded to run thus:—

7. "At any rate, His Excellency desires that some system may be devised, under the orders of the local Government, whereby, at all places of pilgrimage and at all fairs, sanitary arrangements should be invariably made and carefully supervised, in order to check, as far as may be possible, the outbreak and propagation of epidemic disease.

8. "It will probably be possible to meet the cost of such arrangements by levying a small tax, or toll, upon pilgrims; and His Excellency in Council would suggest, for consideration, the best mode of doing this. In some cases it may, perhaps, best be done at the place of pilgrimage, in others by the issue of licenses to the pilgrims at their homes, and before they start on their journey."

The Government of Bengal addressed a Circular, under date the 1st October, 1867, to all Commissioners throughout Bengal, requesting them, after communication with Native gentlemen of their respective Divisions, both personally and through such of their District Officers as they might consider most likely to be able to ascertain the real opinions of the Natives, to report on the subject of the letter from the Government of India, No. $\frac{5}{3} \frac{5}{7} \frac{5}{6}$, of 21st August, 1867.

The Circular Letter of the Government of Bengal.

It was pointed out that the instructions of the Government of India resolve themselves into two distinct parts: "*First*, the question suggested in paragraphs 5 and 6, whether anything can be done to discourage the people of the country from making pilgrimage; *second*, the question raised in paragraphs 7 and 8, as to the measures which it may be proper to enforce on all occasions of large gatherings, whether at places of pilgrimage or fairs, for checking the outbreak and propagation of epidemic disease, and the means of carrying out such measures." These two subjects the Commissioners were desired to keep distinct in their replies.

Eleven Commissioners sent in replies to the Circular of the 1st October, 1867. Their communications are of great interest. It may fairly be said that all these Officers, as well as all the Native gentlemen consulted, are of opinion that the possibility of discouraging intending pilgrims is hopeless."

Remarks on the replies of Commissioners of Divisions.

On the second point, viz., "as to the measures which it may be proper to enforce on all occasions of large gatherings," and as to "the means of carrying out such measures," their opinions are somewhat varied.

Without attempting to lay down, in abstract, all the opinions of the Commissioners of Divisions, (a work which has already been accomplished in the Bengal Secretariat,) I shall take the liberty of alluding to them in general terms, and of extracting from their reports such passages as, in my opinion, serve to indicate the proper line of action which it would be right to adopt in this difficult matter.

Mr. Montresor, Commissioner of the Burdwan Division, observes that "the mass of pilgrims is composed of the poorer and ignorant classes, to whom it will be difficult to explain the motives of the Government, and who, hearing them, will in all probability misunderstand them." Further, Mr. Montresor is of opinion that any tax levied on pilgrims "might be very easily represented as an interference with religion."

Mr. Montresor's opinions.

Mr. F. B. Simson, Officiating Commissioner of the Dacca Division, observes: "Fairs might be stopped, but it would be an unwarranted interference with trade. But pilgrimages are different; they are a source of profit to the Brahmins, and that very influential class will, therefore, neither discourage them, nor permit their disciples to listen to arguments against them." The risks from exposure and disease "are regarded as part of the trial and penance to be undergone; without such chances

Mr. Simson's opinions.

of loss of life, the pilgrimages would be considered inefficacious. A devotee dying during a pilgrimage is considered to have met with a happy fate. Mr. Simson is of opinion that "all the Government can do is to regulate pilgrimages, and make them as little baneful as possible."

Mr. R. P. Jenkins, Officiating Commissioner of the Patna Division, is of the same opinion, which he expresses in somewhat different words.

Mr. Jenkins's opinions.

Mr. Jenkins states "that any prohibition to attend at religious ceremonies or fairs connected with them, would at once be considered as an attempt to interfere with religious freedom, and would give rise to all kinds of rumours, and thus open a door to the disaffected to work on the feelings of the people, and create discontent and dislike to our Government, which in time might grow into open rebellion, as serious and dangerous as was the Indian mutiny of 1857."

Persuasions not to undertake pilgrimage at unhealthy seasons are met, Mr. Jenkins observes, by the reply that "even if the intending visitors died on the road, it would be well for them, as it is a sure pathway to heaven."

Mr. W. Le F. Robinson, Officiating Commissioner of the Rajshahye Division, is of opinion

Mr. Robinson's opinions.

that "nothing short of a general prohibitive order would have the desired effect;" and even that would be uncertain. Such an order "would be looked upon as interfering with the religious feelings of the people, who are perfectly aware of the risks they run and accept them willingly, utterly regardless of the misery they cause." Mr. Robinson thinks that a tax would not have the slightest effect in decreasing the number of pilgrims, unless it was made so high as to be almost prohibitory, in which case a prohibition might as well be issued at once.

If it were determined to levy a tax, and it were carried out, Mr. Robinson thinks the extortion which would be practised would be very great, "especially if the Police were to assist the farmer."

Lord H. Ulick Browne, Officiating Commissioner of the Chittagong Division, thinks that

Lord Ulick Browne's opinions.

any attempt to discourage the people of the country from going on pilgrimage would be regarded as nothing but an attempt to interfere with their religion, a notion which would be fostered to the utmost by the Brahmins, "who live in idleness and luxury by the proceeds of pilgrims' fees."

Lieutenant-Colonel J. C. Haughton, C.S.I., Commissioner of the Cooch Behar Division,

Colonel Haughton's opinions.

reports that the Native gentlemen in his Division "are of opinion that any direct action on the part of the Government towards the prevention of pilgrimages will interfere with the religious liberties of the people. The Natives still firmly believe that the hardships endured, and the expenses incurred on pilgrimage, pave the way to their final beatitude." Colonel Haughton does "not think a pilgrim tax expedient in the present day."

Colonel E. T. Dalton, Commissioner of Chota Nagpore, gives it as his opinion that

Colonel Dalton's opinions.

no "attempt should be made to discourage the people of India from making pilgrimages;" he believes our warnings of danger would simply have the effect of increasing the number of pilgrims. "To prohibit

pilgrimages would be regarded as religious persecution, and a gross breach of the Royal Proclamation of liberty of conscience." It would excite the people "to a pitch of the highest enthusiasm,"—death at the shrine being the release of all others which they most covet, as ensuring eternal bliss. Colonel Dalton believes it is not difficult to put off pilgrimages *for a season*, "but this is very different from preventing them altogether." "The stoppage of pilgrims on the road to shrines when cholera or other epidemic disease has broken out has, in Colonel Dalton's experience, not been resisted or given offence." He is opposed to the taking out of licenses, and he thinks that such a measure would be "a vexatious interference with the liberty of the subject," and that "it would also, in a very objectionable manner, re-connect Government with the question of the resort of the people to idolatrous shrines." "It would be regarded simply as a scheme to raise revenue from their devotional feelings."

Mr. A. Money, late Commissioner of the Sonthal Pergunnahs, writes "of the inefficiency of all attempts to dissuade pilgrims by arguments and reasons."

Mr. A. Money's opinions.

He is of opinion that a tax "would be a gross violation of the liberty of the subject." If it were so heavy as to act as a deterrent, it would be considered "oppressive and unjust;" if, again, it were light, it would be regarded "as an annoyance and an interference with religious rights;" and the odium which would attach to it would be out of all proportion to the advantage derived. Mr. Money does not consider the danger of infection from cholera such as to warrant interference, on the part of the Government, with the liberty of the subject and the prejudices of the Hindoos. He would leave the matter (of pilgrimage) "to the slow but certain influence of education and progress."

Mr. E. W. Molony, Famine Commissioner, Cuttack, is of opinion that, beyond a warning and intimation of existing disease, no coercive measures should

M. Molony's opinions.

be resorted to to prevent pilgrims entering infected localities.

The exposure and pauperage consequent on delay or detention "would," Mr. Molony believes, "be likely to produce more sickness and mortality than it would avert." He has no doubt that "much may be effected by simply warning the inhabitants" of Orissa, and he is informed, "on respectable Native authority, that existence of disease at Pooree does, in a measure, deter intending Ooriyah pilgrims from resorting there at seasons when it is known to exist."

Mr. R. B. Chapman, Officiating Commissioner of the Presidency Division, submits to Government the opinions of influential Native residents at

Mr. Chapman's views.

the Presidency on the two points under consideration.

Mr. Chapman writes: "I take it as established beyond dispute that, in their opinion, at any rate, it would be both hopeless and mischievous for the Government to attempt in any way whatever to dissuade the people from pilgrimages, and most inexpedient to levy any distinctive tax from pilgrims for sanitary or other purposes." Mr. Chapman entirely agrees with his correspondents, and so do the Officers under him. Mr. Chapman is himself of opinion that it would be degrading and useless to advise people to abstain from what they consider beneficial to their souls, because it may involve hardship or danger to their bodies. He further writes as follows: "Then, again, as to a pilgrim tax, the very name to me is sufficient, and

reminds me of the bitter controversy which ended seven and twenty years ago in the abandonment of such a tax on the pilgrims to Juggernaut." Mr. Chapman thinks that the best possible sanitary arrangements should be made, and that their expense "should be borne by those who profit by the gathering; where this is not found practicable," (he adds,) "the general revenues must supply it."

Baboo Jotendro Mohun Tagore states that "the practice of visiting places considered holy forms one of the sacred duties of the Hindoo, and is enjoined by the Shastras as a means of securing future happiness," and that "any attempt to discourage such pilgrimage will naturally militate against the cherished religious feelings of the people, in a manner likely to produce widespread discontent among them."

The same gentleman considers that "it cannot be a sound financial policy to multiply petty taxes for special purposes, and as the Government recognize the necessity of maintaining the Police for the protection of the person and property of the pilgrims, without resorting to a special tax, it may, on the same principle, provide sanitary measures out of the general revenues of the empire." He thinks a system of sanitation should be organized, and the expenses defrayed from State revenue; and he believes that a pilgrim sanitary tax would be liable to misconstruction by the people, who are always "jealous of any interference in religious matters on the part of an alien Government."

Baboo Romanauth Tagore writes as follows, on the subject under consideration :
 Baboo Romanauth Tagore's opinions. "Pilgrimage is undertaken by the Natives of India from a purely religious motive, and, however the Government may protest that it has not the remotest wish to interfere with their religious feelings, any attempt to discourage it, though with a view to protect their health, will, I fear, be regarded with the greatest jealousy and distrust. The idea of pilgrimage being notoriously bound up with their notions of future bliss, I respectfully question the wisdom and good policy of imposing any restriction on the freedom which Her Majesty's Indian subjects at present possess to visit any shrine or fair."

This gentleman fully admits the propriety of adopting such sanitary measures as may prevent the outbreak of epidemic disease. But he adds: "It is the manifest duty of the Government to provide such measures, and the revenues contributed by the people, I humbly submit, cannot be appropriated to a better purpose than the preservation of their lives." He considers "it would be a retrograde move to revive the tax after the lapse of more than quarter of a century, whatever may be the object of its imposition."

Baboo Obhoy Churn Mullick, Roy Bahadoor, is of opinion that "any attempt to dissuade the pilgrim class from their superstitious belief, by legislative enactment, however tolerant its provisions, will be interpreted by them as if the Government had an intention to curtail their religious privileges."

Baboo Obhoy Churn Mullick's views.

Baboo Degumber Mitter observes : " If sanitary reasons be allowed to over-ride all other considerations, they will apply equally to the Palanpore, the Caehar, the Titalyah, and other fairs held under the auspices of Government, as also to the agricultural and other exhibitions, as to the national fairs of the country. But they are, for social, commercial, and even political purposes, of such great importance, that it would be most injudicious to interfere with their success by taxing everybody alike who frequented them." He continues thus :—" In a country so full of temples, shrines, and sanctuaries as India is, where almost every river has more than one holy spot, and every lump of stone under a big tree is an emblem of some god or other, and all of them draw pilgrims more or less numerous from distant places, it would be a positive nuisance to have a general pilgrim tax ; and if the example set by the British Government be taken up by the Native States, the amount of mischief that will be done in the name of sanitation will be incalculable." Further on in his letter he expresses the opinion that " the proposed pilgrim tax is sure to be a most fruitful source of widespread harassment, extortion, and oppression, which the Government cannot possibly prevent or check." Baboo Degumber Mitter is of opinion that the pilgrims have only to learn the fact of the actual prevalence of epidemic disease at any particular shrine " to postpone their intended pilgrimage, as has already been seen in the case of Baidyanauth in 1865, when small-pox had broken out epidemically there, and, during the last two years of famine, at Juggernaut."

Baboo Joykishen Mookerjee refers to the benign influence of the British Government as having " worked a great change in the feelings and opinions of the people on this subject of pilgrimage." He adds, " it is hoped that, with the progress of civilization, people will hesitate, if not entirely cease, to sacrifice for a dubious spiritual good their best temporal interests." He is of opinion, however, that " it would be at present almost a hopeless task to attempt to dissuade the people from resorting to places which they have been from their infancy taught to regard as sacred, and to connect with their hopes of salvation and eternal happiness." This gentleman is of opinion that " in cases of outbreak of virulent epidemic diseases, proclamations should be widely circulated, as has been done of late years, notifying the fact, and preventing the resort of new pilgrims to the affected place."

Lastly, he believes that " a tax on the pilgrims would, to a great extent, check the progress of inland trade, which is carried on to an enormous extent on the occasions of these gatherings."

Baboo Rajendra Lall Mitter believes " it is futile to expect that persuasion and anathemas will check pilgrimages to any appreciable extent." He is of opinion that " the incidence of the proposed tax, intended as it is for the good of all classes, cannot fairly be confined to pilgrims." He thinks any tax which applies to pilgrimages would apply with equal force to all large fairs and festivals. But to tax persons meeting at such festivals (some of which are got up by private individuals or private subscriptions, held on private property, and attended sometimes by many thousands of individuals) would, in Baboo Rajendra Lall Mitter's opinion, be attended " with

grave injustice to the rights of private hospitality, and serious injury to the social customs and usages of the people."

The same gentleman considers that "the owners and pundahs of temples and holy places, and those who celebrate large and costly festivals, should be required to carry out the conservancy of the grounds on which they invite and collect vast crowds of people;" and, lastly, he is of opinion that "the Government should abstain from a scheme of taxation which is unsound in principle, and which cannot be enforced universally or impartially without causing an amount of vexatious interference, which to the people at large will prove a far greater nuisance than an occasional epidemic of cholera can possibly be."

The above extracts, taken from the replies of Commissioners of Divisions and of Native General remarks. gentlemen to the Circular letter of the Government of Bengal, dated 1st October, 1867, by no means give anything like a fair idea of the general value of those replies. My object, however, has been simply to adduce such of the opinions as bear more or less directly on my own views regarding the question of a pilgrim sanitary tax. The Commissioners have offered numerous suggestions relating to precautionary measures which ought to be adopted against the prevalence of epidemic disease; almost all these suggestions are thoughtful and well-judged, and allusion will be found to many of them in different parts of this Report.

My own opinions on the subject of a sanitary tax.

All things considered, I am of opinion that no tax or toll should be levied from pilgrims; nor do I think they should be licensed to go on pilgrimage.

Such measures would, it appears to me, at once bring the Government into distinct relation with the shrines, and with the free-will of persons desirous of proceeding to them.

They would feel that on payment of a certain sum they might go on pilgrimage; failing which they should not go. It would probably matter little to the pilgrim whether such taxation were termed religious or secular, special or general, sanitary or otherwise. He would simply bear in mind that he could no longer go to certain shrines without paying money, which of late years had never been required of him. Again, the people would doubtless be prejudiced against the tax by their priests. However carefully avowed might be the policy of the Government, however precise and explicit the representation of its wishes, the tax would not only be an unpopular one, but it would be pictured to the people by interested persons as a vexatious and tyrannous impost. It would thus provoke discontent and passive resistance. Although the people had not the power to assail the system, they would, I believe, entertain sinister opinions regarding it, and they would consider it in the light of a fresh burden imposed upon them by the State. I do not mean to assert that I myself consider such a project fairly open to suspicion and a reasonable ground of discontent. I by no means do so. I do not consider that it would be an actual violation of justice or of constitutional or religious liberty. On the contrary, I think that it would be politically just; and, at the same time, I am fully convinced that nothing can be further from the intention of the Government than to interfere, even to the slightest degree, with the cherished religious feelings of the people.

In spite of any such private opinion, however, I cannot but believe that a pilgrim sanitary tax would be unpopular, and, if so, its unpopularity would at once be very widespread. In this respect it would be politically inexpedient, and I fear it might thus have the effect of hindering, instead of furthering, the progress of sanitation in India—a result which must clearly be avoided as much as possible. Sanitary hindrances might very easily be construed into direct religious hindrances, and I believe that the subtle wit and cunning of interested Hindoo priests and pundits—whose influence on the feeble and indiscriminating judgment of the people is unquestionable,—would so represent the acts of the Government as to convince the poorer and ignorant classes that they were directly and wilfully oppressive. The pilgrim class of Bengalees is unfortunately, to a great degree, steeped in that ignorance which it requires but little to convert into unreasoning and dogged prejudice. This in itself, I am aware, may not be considered sufficient argument against the imposition of a tax. But, in the present instance, I cannot help thinking that such a consideration must be allowed to have some weight. Again, whatever explanations or declarations to the contrary might be offered, the people would be apt to believe that such an impost as the sanitary pilgrim tax was the simple re-introduction of an enactment which was rescinded nearly thirty years ago, one the justice of which Government has continued to repudiate during the whole of that period.

It will thus be seen that I am opposed to the imposition of a special sanitary tax on pilgrims. Not that it is objectionable in itself,—far from it; but because it appears, for certain strong reasons, politically inexpedient. I am well aware that many powerful arguments can be adduced why the pilgrims, crowding together, and so favoring the conditions of disease and misery, ought to be directly taxed. Such a tax would, doubtless, be beneficially expended, and that it would be the means of saving life is certain. Yet I have pointed to its objections, and I would fain see the same good accomplished in a different manner. It is not the good that I object to, but simply the proposed plan for meeting the necessary expenditure. It may be argued that taking a rupee from the pilgrim would, in the long run, only be taking that sum from the pundits or priests. That is one way of looking at it; another is that it is taking from the pilgrims a rupee when they most want it, and when (on leaving Juggernaut) they are about to have little enough left in hand barely to sustain nature. Can any one look upon and watch those attenuated, destitute creatures on the roads of Orissa, and yet recommend that they be taxed by the Government? I myself cannot do so. I believe that any tax would, directly or indirectly, tend to beggar them. In the expression of such an opinion some might consider that I lay myself open to the charge of absurd delicacy of conscience and even of sentimentalism. But, ready as I am to incur any charge or criticism of the sort, I simply state what I honestly believe, and record what seems to me advisable. In this spirit I presume to endeavour to dissuade the Government from doing that which might by some be construed (perhaps not altogether without reason) as very inconsiderate, if not actually arbitrary and oppressive.

The Government of India has always acted in a manner which evinced its deep concern for the physical wretchedness of its Native subjects. The history of the many public charities in every district of India amply attests the fact. So now, to relieve a vast amount of misery in its saddest forms, amounting at times almost to positive *national calamity*, I would

recommend the Government to find ways and means of meeting this great necessity from imperial resources.

This appears to me fairly a matter for public administration, and the money required may, I think, not unreasonably be expected from the public treasury. Every pilgrim pays his quota of taxation to the State, and I agree with Baboo Romanath Tagore that "*the revenues contributed by the people cannot be appropriated to a better purpose than the preservation of their lives.*"

At present there is an educational cess in India which, I believe, it has been proposed to fix at 2 per cent. Sir Alexander Grant, in Bombay, on the occasion of the public meeting lately convened to present him with a farewell address, observed that "during the last year's administration there had been just over one per cent. of the revenues of the Presidency spent on education, science, and art, &c. "Let this be compared," he said, "with about 40 per cent. paid for military expenditure; and how could people boast that it is the mission of England to educate India, when such a pittance was all that was allowed for education." To Sir Alexander Grant's remark I would add: compare these statements with the fact that *no regular allowance whatever* is made from the revenues of the Government for special sanitation, and how can people suppose that we are to check or mitigate those great epidemic visitations which, to a great degree, depopulate India, and the effects of which are nevertheless allowed to be greatly within human control by the expenditure of public money. One of the great sanitarians of England wrote thus: "We see the first step that must be taken to elevate a people, nay even to bring them within the pale of civilization:—we must improve their sanitary condition. Until this is done, no civilizing influence can touch them. The schoolmaster will labour in vain; the minister of religion will labour in vain; neither can make any progress in the fulfilment of their mission in a den of filth. Moral purity is incompatible with bodily impurity. Moral degradation is indissolubly united with physical squalor. The depression and discontent of the hovel produce and foster obtuseness of mind, hardness of heart, selfish and sensual indulgence, violence and crime."

The Government of India is now, in no way, connected with idolatry. It has prohibited *suttee*, infanticide, ghaut murders, and human sacrifice of every sort. It no longer profits by a pilgrim tax; it no longer pays "pilgrim-touters;" it no longer receives offerings or presents made to Juggernaut, or fines collected there; it in no way supports or superintends the establishments of idolatrous shrines; it derives no revenue from idolatry; it has entirely severed itself from such things; the pilgrim tax has long been repealed, and yet the horrors of pilgrimage exist. It appears to me that here there is a great work of mercy before the Government. To alleviate the miseries of the Indian people, and to preserve human life to the utmost, is, in my opinion, one of the most binding duties of the State. Some Natives have argued—and, I think, not altogether without reason—that, as the expense of the Police establishment is met from imperial resources for the protection of person and property, so any sanitary measures that may be deemed advisable for the safety of public health might also, with fairness, be derived from the same source.

It has been suggested—I think judiciously—that wealthy Native gentlemen, repairing to Juggernaut and other much frequented shrines, should be stimulated to make donations

towards the mitigation of the evils attending pilgrimage undertaken by the poor; and voluntary subscriptions with a similar object might, in other ways, be encouraged. For this purpose, a "Pooree Sanitary Fund" might be established. If a Lodging-house Bill should come into operation, a certain sum of money will be available from that source. And something may also be derived from fines imposed for breach of conservancy laws, although I am aware that it is not right to depend upon such fines,—laws being framed to be obeyed, not to be broken. But over and above these possible sources of local Municipal revenue, I cannot but think that the Government should annually allot, from the public treasury, a large sum for the systematic alleviation of the physical miseries which are so painfully apparent throughout Orissa during the entire year, but particularly at stated periods, when people, from every part of India, crowd thither. This is a matter by no means affecting Pooree alone, or even Orissa, nor does it bear merely upon the comfort of pilgrims. *It is a great question affecting the health-interests of the general population of India.* If it is regarded in any narrower light than this, its true character and bearings must be misunderstood. Looking at the subject in its true and vastly comprehensive relations, I think it is not too much to say that Government would act wisely in setting apart, from the imperial revenue, one lac of rupees a year, for the next three or four years at least, for the special object of inaugurating and enforcing all such measures as modern science teaches us are capable of mitigating the evils which attend on those destructive outbreaks of epidemic disease that year after year account for a vast deal of preventible mortality in Orissa.

Being anxious to learn the opinions of the Missionaries on the "Sanitary Pilgrim Tax" question, I addressed the following letter to the Reverend J. Buckley, Senior Missionary at Cuttack :—

SIR,

I have the honor to address you regarding the pilgrimage to Juggernaut.

2. With reference to our conversations on this subject, I should be glad if you would kindly favor me with your opinions, in writing, on three points :—

1st.—Regarding any persuasive measures which might, in your opinion, tend to have the effect of diminishing the number of pilgrims proceeding annually to Pooree.

2nd.—To what degree it appears to you that a sanitary tax might fairly be levied from the pilgrims.

3rd.—In the event of no such tax being imposed, what measures you would suggest as being capable of counteracting, or of mitigating, the many physical evils resulting from pilgrimage.

3. I should be glad to have the Reverend Mr. Miller's opinion, as well as your own, on the three above-noted points.

I have the honor, &c., &c.

To the above I received the following reply from the Reverend Mr. Buckley, which, although it somewhat unceremoniously treats of the policy of the Government, will, I have no doubt, without hesitation, be published under a liberal censorship, inasmuch as it is undoubtedly the result of straightforward conviction.

Without altogether agreeing with Mr. Buckley in his opinions, I submit his letter to the Government as worthy of consideration :

FROM

REV. J BUCKLEY,

Cuttack,

TO

DR. D. B. SMITH,

Sanitary Commissioner for Bengal.

Dated Cuttack, 14th July, 1868.

SIR,

In reply to your letter of the 7th current, regarding the pilgrimage to Juggernaut, I have the honor to give my opinion on the points solicited, as follows :—

2. I do not believe in the efficacy of persuasive measures on the part of Government ; Governments don't persuade,—they coerce. To refer to the highest authority, they “bear the sword,” “are a terror to evil doers.” It is moreover evident that the most pertinent and weighty considerations of a persuasive kind, such as the dishonor done to the only true God, the absurdity of expecting religious merit from the sight of an ugly idol, &c., are considerations that the Government could not employ.

3. I have the gravest objections to a tax on pilgrims. The old pilgrim tax was productive of an incalculable amount of evil. Its history, from the beginning to the end, (only known now to a few,) is a series of deplorable blunders—not to use a stronger term—on the part of the rulers of India. It discloses one of the darkest pages in the history of our connection with this country ; and it would be difficult to advert to any fouler stain on the honor of our common country, or to any greater reproach on the purity of our common faith, than a “Governor-General in Council observing with satisfaction the increase in the revenue,” arising from the number of pilgrims at a certain festival,—an increase obtained, as all must have known, by insulting the God of the whole earth, and by the destruction of many of His creatures. The abolition of the tax was obtained more than a quarter of a century ago, after a hard-fought battle, in which justice, truth, and piety happily triumphed over the groundless fears, miserable sophistries, and low

expediency views of many public officers. Its abolition was ordered from England seven years before carried out by the Government of India, and it was certainly never contemplated that a tax so obnoxious, and only productive of evil, should ever, in any form, be re-imposed. Its re-imposition would, in my opinion, be one of the most deplorable mistakes which the Government could commit.

4. I am aware that, in reply to all this, it will be said that the tax would be now imposed solely for sanitary purposes, and that the objections formerly existing would not fully apply. But I am afraid that it will not be so understood by the pilgrims, or by the people in general. The old pilgrim tax was always used by the priests of idolatry as a proof that the ruling power supported Jagannauth, and it greatly increased the celebrity of the shrine. So I fear this would do.

5. In the event of this objectionable tax being imposed, (which, I trust, may not be the case,) on what principle would it be levied? Would the wealthy Rajah and the helpless Bengalee widow pay the same? I have heard rumours that this has been contemplated. It would, I think, be extremely objectionable. The adherents of Juggernaut now say that all castes are equal before him, and may alike eat in his presence; and, in a tax imposed on such a principle, they would find proof that would convince multitudes that the rulers of India believed in their theory. Under the law of God there was *one* offering, in reference to which it was ordained that a certain stipulated sum should be paid alike by all: "the rich should not give more, and the poor should not give less;" and this was appointed because all souls were of equal value before the Most High, and because the poorest as well as the richest was equally welcome to, and might be equally benefited by, the holy services of the sanctuary. I hope that a Christian Government is not about to apply a principle so just and important in such a connection, to the hateful temple of Orissa's hideous idol.

6. If the contemplated tax should be graduated according to the position and wealth of the pilgrim, it would, on other grounds, be very objectionable; and my deliberate judgment is that it will be far better to let it alone altogether than impose any tax; for the evil that would be certain to result from such a connection with an idolatrous shrine would be much greater than the good that sanitary measures would effect.

7. But it is not necessary to let it alone. I submit for your candid consideration the following suggestions:—

(a) As the Government cannot interfere directly with the pilgrimage, though so destructive of life, its attention should be directed to the correction of abuses. This will be found a work of no small difficulty, and will require constant vigilance.

(b) Supervision should be exercised over the lodging-house keepers, so that only a given number may be accommodated in a given space; and other things that I need not particularize should be carefully inquired into. Pooree has always been, in a sanitary point of view, a gigantic nuisance when the festival has been large. Lodging-house keepers should be under some obligation in regard to any of the pilgrims becoming sick. The general practice has been, when disease has attacked any, to turn them out of doors, and leave them to die in the street; for, as Buchanan said long ago, "there is no mercy in Moloch's kingdom." Such cruelty should not be allowed.

(c) Supervision should be exercised over the *mahaprasad* sold. Interested parties will throw all possible difficulties in the way, but if this be neglected, other sanitary measures will be of little use. It is perfectly known to those familiar with the shrine, that the vile stuff sold at enormous prices as holy food has been, to a large extent, productive of disease and death.

(d) Pooree should have, as formerly, the services of a European doctor.

(e) A dispensary at Piplee appears desirable on other grounds as well as having regard to the pilgrimage. This has, I believe, been several times urged on the attention of Government, but thus far without success.

(f) Notices in the *Gazette* are important when cholera prevails on the road, when dearth is apprehended, or when a larger number of pilgrims are expected than can be safely accommodated. Such notices should always be in the Native papers.

(g) Care should be taken at the ferries; at different times many lives have been lost by inattention to this, or by overcrowding of boats, &c.

(h) Sanitary measures at the shrine are, after all, only a small part of what is required to protect the lives of the pilgrims. Returning three weeks ago from Pooree, I saw at Piplee hundreds of pilgrims lying after a heavy shower on the wet ground; this is done night after night, and its effect in inducing fatal disease need not be stated.

(i) It may be well to remember that the evil, with some of the effects of which the Government has to contend, has existed for centuries, and cannot be remedied at once. Great care will be necessary, lest anything should be done to increase the celebrity of the shrine; but I am sure that nothing will be done with this intention. And after all that can be done in the way of mitigation, we must not forget that God's word will be found true—"their sorrows shall be multiplied that hasten after another god." So it has been for seven centuries in regard to this pilgrimage, and so it will be as long as it continues.

(j) As I have so strongly objected to a tax, I may fairly be asked how I would meet the expenses which sanitary measures would involve. To this I should unhesitatingly reply that the common-sense principle would be to make Juggernaut pay his own expenses; an immense amount of wealth pours into Pooree, and what becomes of it afterwards it would be difficult to say. Let those who fatten on the spoil pay the expenses. I should approve of the Rajah, the purharries, and the pundahs being taxed according to their share of the spoil, to meet the expenses that will be necessarily incurred: this seems to me just.

8. My colleague, the Rev. W. Miller, who has had considerable experience in missionary labours at Pooree, wishes me to state that he entirely agrees with the opinion expressed in this letter.

I have the honor to be,

Sir,

Your most obedient servant,

JOHN BUCKLEY.

From all the above it will be seen that very strongly felt and strongly expressed opinions exist against the levying of a pilgrim tax, even for purely sanitary purposes. Missionaries, the servants of Government, and independent Native gentlemen, all of whom are intimately conversant with the feelings of the masses, agree on the one point, that it would be impolitic and inexpedient to levy such a tax. In this opinion I myself concur,—after having thought over the matter, in all its bearings, with great care and anxiety. The evils of pilgrimage, however, cannot be allowed to continue, without reflecting great discredit on the Government. Under these circumstances, I see no alternative left but that sufficient sums of public money should be set aside for the regulation of the great pilgrimage through Orissa; so to be expended that much human distress and mortality shall be averted, and that it shall be patent to the world that for the relief of widespread national calamity the Government of this country is willing and anxious to assert its power, and prove the deep solicitude with which it beholds the miseries of its people.

I cannot agree with those who consider that it would be “hopeless and mischievous for the Government to attempt in any way whatever to dissuade the people from pilgrimages.” If by discouragement is implied compulsory measures, this might be true; but the Government has carefully repudiated any intention of curtailing or interfering with the religious freedom of the people. I cannot therefore see any reason why it should not, to the utmost, endeavour to *dissuade* poor and ignorant people from undertakings which are liable to prove great evils.

Baboo Joykissen Mookerjee is of opinion that “in cases of outbreak of virulent epidemic disease, proclamations should be widely circulated, as has been done of late years, notifying the fact and preventing the resort of new pilgrims to the affected place.” Again, as we have seen, Baboo Degumber Mitter writes:—“They have only to learn the fact to postpone their intended pilgrimage,” as has already been the case in more than one instance. There are many festivals and fairs held in different parts of India which do not require to be celebrated on a particular day, or at any special time. These can very well be postponed, if sufficient warning be given, without entailing any real hardship on the people. In all such cases, the Government is clearly justified in desiring and in attempting to discourage large gatherings when much disease is prevailing. I would go further and say: under such circumstances, it would appear to be the *duty* of the Government to warn people not to go where health and life are endangered. Proclamations should appear in the Government Gazette and in the Native newspapers, informing the public where disease is rife. The requisite information should also be notified to the people in all districts whence they are likely to be starting on dangerous pilgrimage. They should be informed that in the event of their starting after such proclamations have been issued, they will be liable to find themselves placed under sanitary regulations, or even to be turned back. Similar proclamations should be made at their principal halting-places; so that, where danger is great, they may be dissuaded from advancing. These remarks should only apply with full force to persons proceeding towards places where festivals or religious ceremonies are not held at strictly fixed times, in which cases, consequently, there can be no possible interference with religious freedom and custom. It has been argued that the poorer classes will not be able to understand proclamations, but

although some may not do so, many certainly would; indeed, with care there ought to be no great difficulty in making the wishes of Government known to all.

The Notification by the Hon'ble the Lieutenant-Governor of Bengal, dated 20th February, 1866, was to the following effect :—

“ Official information having been received from the Commissioner of the Cuttack Division that cholera is prevalent in Pooree in an epidemic form, and that it is due probably to scarcity of food, which will greatly be aggravated by the presence of large bodies of pilgrims in the town of Pooree and along the lines of road, people are hereby cautioned of the risk they incur by undertaking pilgrimage to the Juggernaut Temple this season.

“ All Magistrates and Railway Authorities are requested to make this notification as widely known as possible without any delay, and to post copies of it at all Police Stations and Railway Stations for general information.”

I have said that I think it would be unwise and unfair to prohibit pilgrimage altogether, and that it appears inexpedient to levy even a special sanitary pilgrim tax.

The people should be made to know that, as a rule, (*i.e.*, when there is no good reason for enjoining special caution,) they may unrestrictedly go when and where they please; that, in accordance with avowed principles of religious neutrality, they are at all times free to visit temples, shrines, and holy places in any direction; that they may, at pleasure, repair to any fair or gathering; that they may, as their religious feelings prompt, celebrate any or every festival of the Hindoo calendar; that no license, passport, toll, or tax will be placed, as a restriction, on their access to places of devotion or of legitimate trade; that they may act up to all their usual social customs and usages; that nothing will be tolerated the object of which could be to fetter their consciences, or to place obstacles in the way of their religious devotions; and all this quite irrespective of the consideration whether their proceeding to shrines and elsewhere may or may not appear of to be a superstitious character to European minds.

They should be made to know all this: yet, at the same time, they should also know that extended sanitary measures and regulations are to be organized, and that these shall in future be strictly enforced; that all idea of pilgrimage being set aside, they shall be simply treated as masses of men, and not as multitudes of pilgrims; that our views and theirs do not accord in sanitary matters; that whilst they consider it unnecessary, or even impious, to interfere in arrangements which are attended with great loss of life, the Government must regard such a state of things in a very different light; and that the lives and feelings of others have to be considered.

A proper system of conservancy and cleanliness should, as far as it is possible, be most strictly enforced. Every insanitary arrangement, whether it be discoverable on high roads, in huts, in lodging-houses, or in the vicinity of temples and shrines, should be checked. Warning should be given in bazars, and at frequented halting-places, that any one committing

nuisances, or throwing offal, except within prescribed limits, will be arrested and punished. Pundahs conducting persons along high roads might be held responsible for the due observance, by their respective batches of pilgrims, of all sanitary rules that may be laid down. The pilgrim should have three alternatives allowed him ; either he must obey sanitary regulations laid down by the Government ; or he must pay fine ; or, failing both these, he should not be allowed to proceed on his way towards his shrine ; or, if he is already there, and wilfully acting in sanitary matters against advice and regulation, he should be deported. The knowledge of such a step having been carried out in a few instances, would probably have the effect of causing the mass of pilgrims to be afterwards careful in acting up to advice and direction.

PART V.

REMARKS ON CHOLERA AND INLAND
QUARANTINE.

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REMARKS ON CHOLERA AND INLAND QUARANTINE.

I now come to consider the great subject of *cholera* in its bearings on Indian pilgrimage, the measures that it is possible to carry out with a view to limiting its spread, and the *pros* and *cons* regarding inland quarantine in India, as applicable to pilgrims.

This is truly a vast and profoundly difficult subject, and I approach it with those feelings of diffidence which are by no means removed by much thought and study.

Introductory remarks.

I think every man must feel that, in such an immensity of uncertainty, his speculations are very liable to fall far short of truth, and that his mental plummet is not equal to the fathoming of the depths of the still unknown. For my part, I am deeply impressed with such feelings: and if, in the following remarks, I may appear to write in what seems a decided or dogmatic tone, I hope it will be understood that I do so simply that my meaning may be clearly apprehended and my views not misconstrued, and that I may have credited to me a sincere desire to treat with all fairness the opinions of others. I would particularly desire to remark that, although my judgment, and recommendations to the Government, in many respects very widely differ from those of the members of the International Sanitary Conference, I regard with the deepest respect the opinions of the many learned men who, delegated by the different European powers, constituted so vastly important a Commission. With these remarks, I pass on to a consideration of the nature and special characteristics of cholera in India, as affecting masses of men, and as capable, or otherwise, of being limited in its action by measures suggested by human experience. My views shall, as far as possible, take the form of a running commentary on the suggestions and recommendations of the Constantinople Commission. This because the Secretary of State for India, in his letter No. 112, dated 17th December, 1866, to the Government of India, (*vide* Proceedings of the International Sanitary Conference, p. 134,) states it to be the desire of her Majesty's Government that the Proceedings of the Conference should receive further and careful consideration in India; and, again, because I have been directed by the Government of Bengal to indicate what measures should, in my opinion, be adopted to give effect to the conclusions of the Cholera Congress at Constantinople.

I am afraid it must be allowed that we have not yet discovered “the generating cause” of cholera, although it is but the simple truth to say that we *do* now possess a considerable amount of knowledge regarding the conditions favoring or impeding the action of that generating cause, and also regarding the modes and directions in which it operates. It is very common indeed to find it asserted in books that “as yet we know nothing of cholera.” This is by no means an accurate statement. We have, on the contrary, a vast accumulation of knowledge regarding it, a certain portion of which is of considerable precision and value. We thus have, from old records, a tolerable knowledge of the past history of the disease since it first became generally known in India. We know approximately its endemic limits; we know at what seasons it is wont to appear with increased virulence within given boundaries, and when such virulence is likely to subside; we know a good deal regarding the march of epidemics, the direction in which they pass, and the times and localities in which they decline; we know the soils which seem to afford the most favorable *nidus*, the hygrometric conditions which are seldom absent, and many other local *juvantia* of the pestilence; lastly, we know—what has not yet been sufficiently brought to light—the classes of men and the races most violently affected by its action, and the extraordinary difference in the rates of mortality which obtains amongst them. Thus, it is a fact—for the acquisition of which I am indebted to Dr. Bryden, Statistical Officer with the Sanitary Commissioner to the Government of India—that since the epidemic of 1845 until the present time, the mortality between European and Native troops (Goorkhas excepted), in any cantonment of Upper India, has been somewhat in the proportion of *ten to one* in favour of the Native. This has obtained universally. It is not a fact representing the data peculiar to any one year or to any one place, but it has been a fixed, unvarying law, that the ratio of death in the case of European soldiers has been always enormously in excess (speaking generally, as *ten to one*), when compared with the mortality amongst Native troops under like conditions.

The extent of our knowledge regarding cholera.

Great difference in the rates of mortality from cholera—in the case of Europeans as compared with Natives.

Again, it is a fact that Goorkhas suffer very much in the same proportion as Europeans.

Why is this? We may indeed well ask, with the deepest anxiety, why is it. Upon the simple answer to this question must hinge one of the greatest secrets connected with cholera. I believe there are few facts that can be adduced in connection with this disease in India which are so pregnant with significance. I throw it forth, with the consent of my friend Dr. Bryden, for the consideration of medical philosophers.

The cause of this a most important study.

The following statistics set forth the problem :—

Comparative Statement of the loss of the European and Native Regiments cantoned in the same Station, on the occasion of the invasion of Cholera, during the Epidemics of late years.

STATIONS.	Years.	ATTACKED.		DIED.	
		Europeans.	Natives.	Europeans.	Natives.
Cawnpore	1845	1 in 13	1 in 88	1 in 29	1 in 227
Meerut	1845	1 " 21	1 " 1182	1 " 35	1 " 2069
Umballa	1845	1 " 6	1 " 66	1 " 12	1 " 119
Loodianah	1845	1 " 11	1 " 118	1 " 17	1 " 372
Ferozepore	1845	1 " 14	1 " 121	1 " 29	1 " 384
Umballa	1852	1 " 14	1 " 209	1 " 29	1 " 784
Cawnpore	1853	1 " 4	1 " 46	1 " 5	1 " 105
Mean Meer	1856	1 " 3	1 " 29	1 " 6	1 " 74
Ferozepore	1856	1 " 5	1 " 58	1 " 8	1 " 125
Meerut	1856	1 " 20	1 " 130	1 " 37	1 " 260
Agra	1856	1 " 5	1 " 32	1 " 10	1 " 85
Lucknow	1856	1 " 14	None.	1 " 20	None.
Barrackpore	1859	1 " 36	1 in 437	1 " 78	1 in 1312
Dum-Dum	1859	1 " 14	None.	1 " 23	None.
Morar	1860	1 " 7	1 in 141	1 " 14	1 in 235
Jhansi	1860	1 " 19	1 " 911	1 " 47	1 " 2732
Agra	1860	1 " 11	1 " 81	1 " 21	1 " 114
Muttra	1860	1 " 8	1 " 187	1 " 16	1 " 560
Meerut	1861	1 " 24	1 " 156	1 " 32	1 " 311
Delhi	1861	1 " 11	1 " 42	1 " 24	1 " 131
Agra	1861	1 " 11	1 " 44	1 " 17	1 " 132
Morar	1861	1 " 5	None.	1 " 7	None.
Umballa	1861	1 " 25	1 in 180	1 " 34	1 in 360
Mean Meer	1861	1 " 3	1 " 16	1 " 5	1 " 41
Agra	1862	1 " 18	1 " 227	1 " 24	None.
Morar	1862	1 " 14	1 " 233	1 " 22	1 in 326
Jhansi	1862	1 " 14	1 " 397	1 " 20	1 " 795
Meerut	1862	1 " 40	1 " 158	1 " 64	1 " 551
Mean Meer	1862	1 " 12	1 " 56	1 " 22	1 " 102
Umritsur	1862	1 " 20	1 " 112	1 " 40	1 " 224
Peshawur	1862	1 " 11	1 " 76	1 " 19	1 " 132
Benares	1863	1 " 33	1 " 141	1 " 44	1 " 187
Allahabad	1863	1 " 22	1 " 321	1 " 26	1 " 643
Cawnpore	1863	1 " 2	None.	1 " 49	None.
Lucknow	1863	1 " 67	1 in 215	1 " 142	1 in 858
Agra	1863	1 " 35	None.	1 " 53	None.
Lucknow	1864	1 " 47	1 in 1527	1 " 66	1 in 1527
Allahabad	1867	1 " 34	1 " 79	1 " 52	1 " 138
Shahjehanpore	1867	1 " 19	1 " 63	1 " 24	1 " 94
Meerut	1867	1 " 13	None.	1 " 15	None.
Morar and Gwalior	1867	1 " 47	Ditto.	1 " 77	Ditto.
Umballa	1867	1 " 46	1 in 146	1 " 60	1 in 292
Mean Meer	1867	1 " 13	1 " 106	1 " 22	1 " 276
Peshawur	1867	1 " 7	1 " 74	1 " 12	1 " 173
Umritsur	1861	Europeans. 1 in 11	Goorkhas. 1 in 16	Europeans. 1 in 13	Goorkhas. 1 in 19
Ferozepore	1861	1 " 483	1 " 8	1 " 967	1 " 15

It must be understood that no examples exist of the converse of what is shown in this statement; namely, that Native troops in cantonments have suffered severely, while the European troops, in the same cantonments at the same time, have escaped with trifling loss.

* The cholera admissions of the European troops were incorrectly rendered, having been returned under the heads of Diarrhea and Choleraic Diarrhea as well as of Cholera.

The International Conference pleads strongly in behalf of coercive measures during Inland quarantine in India; cholera epidemics. I myself am very strongly opposed to whether it is desirable or not. the enforcing of inland quarantine, in connection with Indian pilgrimages. I have already submitted a Memorandum on this subject to the Government. My views will be further set forth in the following remarks.

I believe that restriction of intercourse between the healthy and the sick, if it be generally and strictly enforced, (in the words of the Conference—Probable result of restrictive measures. “early, with vigour, and completeness,” p. 6,) is likely in this country to prove very inconvenient and oppressive; that is, allowing, for the sake of argument, the measure to be possible, which I do not believe it to be.

When such restriction is considered from a broad point of view, I think it may fairly be said that it must be attended with many disadvantages and drawbacks, and that when it assumes the form of regular coercive quarantine (however carefully and perfectly carried out), it frequently fails entirely of its object. In the face of all that has been written to the contrary by the Conference, I believe that we have it on the authority of numerous (I had almost said of hundreds of) professional men, that cholera appears and spreads where no evidence whatever of direct communication can be discovered, although it be eagerly and closely sought for; *i.e.*, communication of man either with persons suffering from the disease or with infected localities, even indirectly. Indeed, the literature of cholera is replete with instances of the sort, which cannot fairly be set aside.

Again, we know that the disease not unfrequently comes to an abrupt termination, It sometimes ceases suddenly, while human intercourse remains uninterrupted. it may be after a sudden change of weather or the like, human intercourse remaining quite uninterrupted as at first.

“Human intercourse, however,” writes Dr. William Baly, in his well-known and very valuable Report on Epidemic Cholera, “is certainly only *one* cause of the propagation of the disease” (p. 190).

Again, he writes (p. 193) :—“In a large number of instances, the appearance of the disease in a town, and the mode of its first extension through it, as well as the origin of the disease in many public institutions, cannot be explained by human intercourse.” Instances adduced of the spread of cholera, independently of infection.

At p. 194 he alludes to the examples on which Dr. Bryson founds his remarks that “cholera appeared in several ships of the Mediterranean squadron before they had any communication with the shore, and were still at *the distance of several miles from an infected locality.*”

Again, Dr. Baly gives, in Abstract, (Table XV) “*thirty-seven* instances in which the first sufferers appear to have been attacked independently of infection, introduced from without by human means.”

Again, at p. 161, he alludes to “*nineteen* public establishments in which the outbreak of the disease could not be traced to infection brought in by human means.”

Again, at p. 163, he writes: "On the other hand, the same considerations with regard to public establishments give especial value to those instances, few though they be, in which cholera, without obvious vehicles of infection, invaded prisons or lunatic asylums, in isolated situations or in towns at the time free from it." The same opinion is corroborated and strengthened in the page following.

So much for the opinions of the late much-lamented Dr. W. Baly, whose report was published fourteen years ago, but than whom, I believe, we have even now, on the whole, no more reliable authority on the subject of cholera.

The above expressed opinions of Dr. Baly are strengthened by those of many other authorities; and I have myself had repeated opportunities of enquiring into the origin and spread of cholera visitations where it could not be fairly said that human intercourse accounted for the extension of the epidemic.

I am aware that, at p. 85 of the Report, the Commission states "that it does not pretend, and nobody maintains, that imported cholera is always transmitted. Transmission necessitates auxiliary circumstances, which happily are not always met with, or the ravages of cholera would soon cause the extinction of the human species."

These words follow: "In any case it is clear that nothing can be concluded against the transmissibility of cholera from the inefficiency of quarantine."

It may be so, and I shall presently return to the fact that I do not deny the possibility of transmission; yet it may justly be said that if quarantine fails, it affords a proof that cholera can be and is spread otherwise than by direct human communication, and that, therefore, quarantine is a measure of doubtful efficacy, and that, consequently, man is *not* of necessity "the principal importing agent of the disease:" a statement regarding the truth of which the Commission asserts that "there is no doubt." (*Vide* p. 87).

These facts tell against the value of quarantine.

The Commission writes: "There is no sort of proportion between the amount of cholera imported and the intensity of the epidemic consequent upon it." There surely ought to be *some* relation between so-called cause and effect. Again, it is clear that no such statement could be made regarding any purely contagious disease.

The Commission continues thus: "This intensity is proportionate to the more or less favorable condition of the locality to which the disease has penetrated, in the same way that a conflagration is not proportionate to the spark which gave rise to it, but to the combustible nature and the accumulation of the material it finds in its way."

This argument, I must confess, appears to me to be supported on a perversion of logic. The real point under consideration, as set down by the Commission, resolves itself into this: whether or not a given quantity of combustible matter will not be consumed more quickly if simultaneously lighted up in many parts, than it would be if ignited only at one spot.

The Commission then arrive at the following result: "Therefore man tainted with cholera is by himself the principal propagating agent of the disease; and *a single case of cholera may give rise to the development of an epidemic.*"

Thus, then, unless quarantine is *absolutely perfect*, it fails of its object, and an epidemic may at any time ensue. This is a very important consideration, in its relation to the establishment of inland quarantine in India. I shall presently return to it. I will only here add that, in India at least, we continually have epidemics, without even a single case of cholera importing the disease.

The Commission concludes (p. 880), "from the facts mentioned in the report, that it is undeniable that quarantine established on a rational basis, in conformity with the progress of science, may form an efficient barrier against the invasions of cholera." I will not presume to say that this may not hold good in Europe. But bearing in mind the concession above quoted, that *a single case of cholera may give rise to the development of an epidemic*, and having reasons for believing (which I shall shortly adduce) that it is perfectly impossible to establish such inland quarantine in India, in relation to large pilgrimages, as shall prevent single cases from lighting up epidemics, (*i.e.*, if they can do so at all,) I maintain that quarantine in this country, as applied to masses of pilgrims, can never prove "an efficient barrier against the invasions of cholera."

I firmly believe that the "complete interruption of the communications with infected places" in this country, is simply impossible of achievement, except, perhaps, when the experiment is applied on a very small and useless scale. Imperfect at one point, its general value ceases; as an inflated bladder, punctured, it may be to an invisible degree, collapses altogether.

The Commission writes at page 8: "All the world is agreed that measures of quarantine are, after all, considerably less prejudicial to industry and commerce than the invasions of cholera and their consequences."

For one, I cannot concur in any such opinion; indeed, I am fully convinced that "all the world" is by no means agreed on this point.

Even were it possible, it would be most inadvisable to apply it in the case of pilgrims.

The consequences of strict quarantine, applied, for instance, to pilgrims passing through Orissa, would be *most* disastrous in their nature.

Thousands of poor agriculturists, depending for subsistence entirely on the produce of their fields, to which they are hastening from the seat of pilgrimage, might thus require to be detained for a week, or even for several weeks. If anything could artificially induce wide-spread famine and desolation, such a measure as this would undoubtedly do so. When cholera appears amongst our European troops, they are, as a rule, by the Standing Orders of the Army, moved from place to place. When the same disease appears amongst a vast crowd of pilgrims, it is strongly urged by some that strict quarantine and sanitary *cordons* should be established, which in many places, as in Orissa, is simply tantamount to keeping them huddled

together. The two plans are scarcely consistent. The one (leading to dispersion) has been found, on the whole, to be successful. The very opposite of it, one might predicate, is not likely to be *also* very successful. On the contrary, I believe coercive quarantine and *cordon* regulations, as applied to large bodies of Indian pilgrims, are likely to lead to very deplorable consequences, and I feel it to be my duty to endeavour to warn the Government against such a danger. If the pilgrim in Orissa is, against his will, to be detained here and prevented going there, and in other ways bound down by regulation, so often as he finds himself in an atmosphere of cholera, I am afraid the only place in which he can reasonably expect at last to find rest will be the sea. In every other direction he would be liable to find quarantine authorities thrusting him back.

The Conference recommends that "cases of diarrhœa should be retained under observation *until the diarrhœa is cured*, or until the medical officer in charge is satisfied, from the features of the disease, that it is not of a choleraic nature." (*Vide* p. 8).

It would be utterly impossible, in India, to act up to the recommendations of the Constantinople Conference. Reasons for this.

By the majority of the Commission it is believed that the period of infection of such diarrhœa is limited to eight days; the minority, however, consider that it may last for *several weeks* (p. 2).

Again, the Commission is of opinion that a single individual (and *à fortiori* many) coming from a contaminated locality, and suffering from diarrhœa, may suffice to occasion the development of an epidemic of cholera. (*Vide* p. 89). Now, if every case of diarrhœa

amongst Indian pilgrims is to be regarded as a source of danger and the possible origin of an epidemic of cholera, it is clear that all such cases must also be under quarantine (if this is once introduced in earnest, which I can scarcely believe to be possible in India). And, again, as all such cases are to be considered dangerous for at least one week, if not for several, it is evident that a very large medical establishment would require to be continually on the track of the pilgrim.

It is further recommended by the Commission that "the complete disinfection of the effects of persons coming from contaminated places should be insisted on, and that the period of isolation of the persons should be from the time that they are separated from their suspected property" (p. 4).

As my present object is to consider the opinions of the Commission, so far as they are capable of being applied to Indian pilgrimage, particularly that of Juggernaut, I need scarcely say that "the complete disinfection of the effects of persons coming from contaminated places" in Orissa, and "the isolation of such persons from their suspected property," is quite beyond all possibility of fulfilment. It would involve enormous establishments, enormous expense, and the housing and re-clothing, at many different stages of their pilgrimage, of many thousands of persons. Every devotee in Orissa, whether he be journeying to or from Juggernaut, may be said to be coming from a contaminated locality, inasmuch as the chief pilgrimage

occurs at the very season when cholera prevails, by a natural law, both in South-Western Bengal and in Orissa. Whatever might be done to prevent it, any and every quarantine post in Orissa must of itself be a contaminated place at certain seasons of the year.

The Conference states, "it is not very rare to find confirmed cholera not breaking out on board a ship until six or seven days after the separation of the vessel from the infected locality" (p. 90).

In the same way pilgrims leaving contaminated quarantine posts might be sources of danger a week—possibly several weeks—after.

Reason 3.

Is the Government prepared to re-clothe every pilgrim who has had cholera, or who has lately been near a cholera patient?

With regard to this point, the Conference writes (p. 5): "Articles which have been made use of by cholera patients—unwashed linen, dirty clothing—demand the application of the most rigorous means, and especially destruction by fire, as often as circumstances will permit."

The requirements of each proposed quarantine station, as laid down by the Commission (p. 4), consist of:—

1. "An establishment for the reception of the healthy, capable of completely isolating successive parties of arrivals in distinct classes, well separated from each other.

2. "An establishment for the reception of the sick, with an isolated convalescent establishment.

"Each of the above should be provided with latrines, having moveable receptacles, which should be daily emptied and purified.

3. "An establishment for the purification of effects."

All this, as discussed by the Commission, is meant to apply more especially to marine quarantine. At the same time, inland restrictive measures, if

Reason 4.

introduced at all, would of necessity involve very much the same establishment. It is almost superfluous to say that, in as far as Indian pilgrims are concerned, such schemes are utterly impracticable. Setting aside the question of the necessary money expenditure, which would be almost incalculable, we have only to remember that the pilgrims proceeding to and from Juggernaut pass along a high road which, at the season of the Rath Jatra, is, as a rule, for hundreds of miles bounded on both sides by a sheet of water and swampy rice-fields, a situation in which complete isolation is out of the question. Not unfrequently the road itself is under water.

At page 5 the Commission observes : “ We have based the suggestions which we have taken the liberty of submitting to your Lordships upon the supposition that all the *agents employed shall be of an intelligent and upright class* ; ” “ without this it would hardly be possible to limit safely the period of observation to so short a time as above stated.”

Intelligent, trustworthy, and upright agents for the carrying out of scientific arrangements, on a large scale, are not to be had in India. In so far as they failed, to that degree exactly would money be spent, without any public good resulting.

Reason 5.

The Commission believes that the duration of the incubation of cholera “ is generally very short ” (p. 90). But there are exceptional cases, which would lead to the belief that “ the period of incubation may be prolonged for more than twenty days ” (p. 90). Indeed, the following instance is quoted immediately after :—“ At the same period (3rd November, 1848) the ship *Swanton* also left Havre, with 280 emigrants on board, for New Orleans. *Cholera did not break out on board till the 25th November*—that is, *the twenty-third day of the voyage*—occasioning thirteen deaths.”

Surely, if the period of incubation may be extended over twenty-one or twenty-three days, quarantine, to be a reasonable safeguard, ought to be extended for even a longer time.

Reason 6.

At page 105 the Commission writes :—

“ The great majority of the ships leaving Alexandria had no cases of cholera on board during the voyage. Did they not, nevertheless, propagate the disease, even in the absence of proof of any choleraic accident on board ? If they did, how was it done ? We cannot say exactly ; but it is certain that they spread the disease, from the decisive reason that cholera showed itself only where they touched.”

Hence ships “ having no cases of cholera on board ” spread the disease. Then why should not individuals do the same ? If so, a healthy, unaffected agent is to bear the odium of infecting every place where cholera appears ! This is monstrous.

Reason 7.

The Commission, at pp. 105-6, speculates on the causes of cholera appearing in Guadaloupe in 1865. It rejects the idea that the disease was imported by the ship *Sainte Marie*, and is driven to the alternative that the ship *Virginie* may have originated the outbreak. The words of the Commission are these : “ There remains the first version according to which the disease must have been imported, after a long voyage, by a ship coming from an infected locality, but which had had no choleraic accident on board. Whatever the value of this version may be,—and the Commission is unable to pronounce on the point,—it not the less follows (*and this is the capital fact*) that cholera did not break out at Guadaloupe until after an arrival from a locality infected by cholera.”

Now the facts are these : “The *Virginie* left Marseilles on the 3rd September (that is, during the epidemic), and arrived at Pointe-à-Pître on the 9th October, after a voyage of thirty-six days, without having shown, as we are assured, a trace of cholera on board; and it is to be remarked that the outbreak of cholera in Gaudaloupe did not occur until the 22nd or 25th October, while the ship was unloading” (p. 105).

Thus then the Commission is obliged to allow that (by their theory of importation) the ship *Virginie*, which left Marseilles on the 3rd September, infected Guadalupe on the 22nd or 25th October, a period of exactly *one month and three weeks*. Therefore every ship coming from an infected place, whether it has any signs of cholera on board or not, is a possible source of infection, and ought to be subjected to quarantine accordingly. But who can reasonably say that what applies to a ship and to the persons on board it, does not equally apply to persons ashore? Therefore persons ashore, coming from an infected locality, may, *a month and three weeks after*, spread the

Reason 8.

disease by infection; therefore quarantine, as applied to pilgrims, to be a reasonable safeguard, ought to be prolonged for at least a month and three weeks. I cannot see that there is any, the very slightest, forcing of an argument here; indeed, there certainly is none. Is then the Government prepared to establish a quarantine in Orissa, by which pilgrims may, at any time or place, be detained for a month and three weeks? This is but one of the impossible consequences resulting from the idea of subjecting Indian pilgrims to quarantine, “established,” as the Commission observes, “on a rational basis, in conformity with the progress of science.” And we must still remember that, even if such a quarantine as this could be and were established, in

Reason 9.

the words of the Commission, “*a single case of cholera may give rise to the development of an epidemic.*” Consequently, a single case of cholera occurring in quarantine would necessitate the quarantine being prolonged accordingly.

Reason 10.

The Commission, at page 92, comes to the following conclusion: that “in almost every case the period of incubation,—that is to say, the time which elapses between the moment when an individual may have contracted the choleraic poisoning and the breaking out of the premonitory diarrhœa or of confirmed cholera,—does not exceed a few days; *every fact quoted of a longer incubation relates to cases which are not conclusive, either because the premonitory diarrhœa has been comprised in the period of incubation, or because the contamination may have taken place after departure from the infected locality.*”

It is well worth while to sift this opinion to its logical conclusions.

First, then, the ship *Swanton* (*vide* p. 90), with 280 emigrants on board for New Orleans, left Havre on the 3rd November, and cholera did not break out on board until the twenty-third day of the voyage. Premonitory diarrhœa in the case of these emigrants is entirely supposititious. There is not a tittle of suspicion that any such thing existed. In this case, what was the source of infection? If it was the ship on leaving the port of Havre, or if it was the port itself, the limit of incubation *must* have been twenty-three days. If, on the contrary, it was Germany, from places in which country a certain number of the emigrants came, and where cholera was raging, the period of incubation *must* have been yet longer.

In the case of the infection of Guadaloupe, one of three things must have happened : either the epidemic originated there *de novo*, which the Commission will not allow, because it is "a fact hitherto unexampled out of India;" or the *Virginie* imported it there, having been infected a month and three weeks before at Marseilles; or the contamination took place after departure from the infected locality; and this must have been at sea, and the infection must have been air-borne. But the Commission maintain that "the transmission of the disease by the atmosphere remains, in the immense majority of instances, limited to a very short distance from the focus of emission. As for the facts brought forward to prove the transport of the disease by the atmosphere to a distance of one or two miles, they are not sufficiently conclusive" (p. 129).

After this I cannot see how the Commission can come to any consistent conclusion about the epidemic in Guadaloupe,—that is to say, a conclusion consistent with their published opinions. But it is in those opinions that I cannot altogether concur. I believe the infection of cholera can spread in the atmosphere over extended distances, other things (temperature, season, &c.) being favourable, without the necessity of human intercourse. Consequently, my belief in the efficacy of quarantine, as applied to the disease, is so far limited. Again, I cannot

It is possible that cholera may be generated *de novo*.

see any good reason why we should not accept the proposition that cholera is capable of appearing *de novo*. I am aware it is usual to argue that the spontaneous generation of cholera is just as unphilosophical and impossible as the spontaneous generation of living organisms. The two propositions are, however, essentially different to my judgment. The *condition* known as *cholera*, on its first appearance, resulted from a series of altered circumstances, such as had not previously come together; in other words, the result of a new combination of pre-existing circumstances was the *influence* named cholera, which has proved so deleterious to man, but which disappears so soon as a change in the before-mentioned pre-existing circumstances occurs,—again to re-appear so soon as the same combination of adjuncts once more takes place. The so-called poison of hydrophobia I believe to be capable of being regenerated independently in like manner; also, the condition known by the term scurvy, the result of certain circumstances deleterious to man's organism, often leading to diarrhœa, dysentery, and other complications, and disappearing when certain simple collateral circumstances are counteracted. These circumstances are somewhat better comprehended, perhaps, in the case of scurvy and of hydrophobia than in that of cholera; yet the nature of the law by which they are, each and all, capable of becoming apparent, *de novo*, is in itself definite, and not necessarily the same as that which regulates the reproduction of organised beings. A similar illustration might be taken from intermittent fever; varying general circumstances light it up, and the prevalence or subsidence of the disease depends directly on the presence or absence of the said general circumstances.

Why should we suppose that only *once*, throughout all time, those conditions were existent which produce cholera?

It would be a marvellous fact, in the natural history of disease, were it established that a single moment, a single hour, or a single day in the world's history was so specifically different, in its general relations, to all others as to be productive, once for all, of a concatenation of circumstances, unknown and absolutely impossible of recurrence before or since.

My friend Dr. Robert Bird, of Howrah, lately wrote as follows :—

“Some men say that cholera only recently appeared on the earth ; others deny this, and affirm that, were its history carefully traced, it would be discovered that cholera had afflicted men for many centuries. To the former I say, if the disease only recently appeared among men, then, when it did appear, it was generated *de novo*, and having been generated *de novo* over Bengal—its reputed birthplace—why should it not be generated *de novo* at any other place at any other time ? And I ask the latter, if cholera has always been the companion and enemy of men, how is it that it did not invade Europe before the nineteenth century ? It could scarcely be that there was in other times no stream of human intercourse along which it might travel ; for the illustrious Tamerlane, after having taken Delhi and seoured even Hurdwar itself, met and overthrew Bajazet before the walls of Angora, and then chased the remnants of his scattered army into Europe. (*Vide* “The Indian Annals of Medical Science,” No. XXIV, Art. “Idiosyneraey,” p. 152).

If cholera *can* be reproduced independently, which many pathologists believe, it is clear that quarantine can never possibly control its propagation and diffusion ; and even if such reproduction, absolutely *de novo*, is not possible, it is yet allowed by the Commission (p. 121) that “the soil of a locality once impregnated with choleraic matter has been able to retain for a long time the property of evolving the principle of the disease, and thus keep an epidemic alive, *or even regenerate it after its extinction.*”

This being so, and Orissa being a country which has, on all sides, been freely impregnated with choleraic matter, it follows that the principle of the disease is liable to be evolved almost universally, and epidemics to be thus regenerated after their extinction. This is clearly a source of danger which no quarantine could perfectly control.

The Commission writes (p. 96) :—

“There are cases tending to prove that transmission of cholera has occurred by means of articles kept shut up for several months.”

Every pilgrim leaving Juggernaut brings away with him or her, as the case may be, *moha-persad* (holy food) and other relics of the place, which they carefully wrap up and close in firm wicker baskets. All such relics come from the very centre of a contaminated locality. Unless they were all destroyed, they might, according to the above statement, transmit cholera several months after. Such a destructive measure in itself, although in a sense possible, would prove extremely difficult of accomplishment.

The Commission writes as follows (p. 127) :—

“These circumstances, joined to facts shewing that persons have been attacked by cholera at some distance from a focus of the disease with which they had no communication, prove, in point of fact, that *the atmosphere is the principal vehicle of cholera.*”

The proposition that “the atmosphere is the principal vehicle of cholera” strikes at the root of the principle recommending quarantine.

Taking it for granted that this is true, it strikes at the very root of the principle suggesting inland quarantine, in spite of what follows in the next paragraph.

If the atmosphere is the chief vehicle of cholera, is it reasonable to assert that the prevention of contact between human beings is the most certain method of arresting its spread? We might, on somewhat the same principle, argue that at the very height of an Indian dust-storm the atmosphere could best be cleared of all its dust by distancing as much as possible every human being from his neighbour. If the dust-storm depended upon the proximity of one individual to another, and if its density varied in exact and *certain* proportion to such proximity, doubtless the counteracting of this circumstance would be an essential towards prevention. But if, on the other hand, the *atmosphere* is the chief vehicle both of cholera during its spread and of dust during a dust-storm, and if human segregation can, as the Commission believes, control the spread of cholera, the same arrangement might not unnaturally be expected to have a marked influence on the advance of the typhoon. But it is scarcely necessary to say that man has never yet proposed to lay the dust by altering the distance between human beings. Such trains of thought can, by analogy, have but one effect, *viz.*, the reducing to the absurd the proposition that quarantine, (*ie.*, the regulation of the movements of human beings as so many automata) is capable of producing the most marked differences in the conditions which are truly the results of general climatic and atmospheric operations.

The Commission arrives (p. 106) at the following conclusion :—

The relation between cholera and over-crowding.

“That the intensity of epidemics of cholera on board ships crowded with men is, in general, proportionate to the crowding.”

I do not deny the truth of this in general, yet it is important to remember that it is not an unvarying result.

Thus, at page 103, the Commission writes :—

“The ships from Marseilles which brought the first infected troops by whom cholera was spread (in the Crimea), had only a few cases on board during the voyage, notwithstanding the enormous crowding; and in 1832, while cholera was raging in England amongst the numerous vessels which carried 33,000 passengers to Quebec, only two—the *Carrick* and *Royalist*—had any cases of cholera on board during the voyage.”

The facts embodied in this last quotation scarcely tally with the proposition laid down by the Commission at page 36 of their Report, *viz.*, “that *cholera spreads everywhere in proportion to the facility and multiplicity of communications.*” Here was ample facility of communication, and yet a merely nominal spread.

Cholera does not spread everywhere in proportion to the facility of communications. Proofs of this.

Again, at page 87 of the Report, we find these words :—

“It is certain that the regular steamers from India, which have been working for a great number of years, have never imported cholera into Suez.”

Proof 1. Allowing this to be correct, it surely goes to prove that cholera does *not* always spread in proportion to the facility and multiplicity of its communications.

Dr. Baly (p. 146) writes of the *Carrick* and *Royalist* as follows :—

“ In the case of ships crossing the Atlantic, it is a rare occurrence for cases of cholera to be thus imported ; so that, it is said, only two emigrant vessels, the brigs *Carrick* and *Royalist*, arrived at Quebec, on board which any passengers had died of cholera during the season in which it broke out in that city. And those two vessels, with the exception of the brig *Brenda*, at Baltimore, were the only vessels even suspected (before 1848) of having conveyed this poison across the Atlantic.” Again, on the same page—“ Even in the English ports, during the prevalence of the epidemic in the north of Europe, the arrival of ships having persons sick with cholera on board has not been a very frequent occurrence.”

Again, at page 137, Dr. Baly cites the following very pertinent observations:—

“ One general fact in the history of the spread of cholera from country to country, as yet scarcely noticed, seems, at first sight, to negative the diffusion of the disease by human traffic. It is the occasional sudden arrest of the progress of the epidemic after it had been progressively advancing. The two most remarkable instances of this occurrence have been cursorily mentioned, namely, the arrest of the epidemic at Bombay and in the north-west part of India, from 1818 until 1821, when, for the first time, it reached the shores of the Persian Gulf; and its still more remarkable arrest in 1823 at Astracan, beyond which town it did not extend further into Russia until 1830. How can these facts be reconciled with the idea of transmission by human intercourse? It seems difficult to believe that no opportunity occurred for the transmission of the poison by human intercourse from Bombay to the towns on the shores of the Persian Gulf for three successive years. And although the difficulty is somewhat less in the case of Astracan, since the disease commenced there in September, and was cut short in the winter, apparently by a severe frost, and some attempts, it is said, were made to confine it by means of a *cordon sanitaire*, yet here too, as the disease existed in other places on the borders of the Caspian Sea, its arrest seems to be referable, with much less probability, to the failure of its transmission by men than to an adverse condition of the atmosphere.

“A similar obstacle to the application of the theory of the diffusion of cholera by human intercourse is met with again in the preference of the epidemic for certain tracks in its course through Europe, while it left countries on either side, at least for a long period, wholly unvisited, a fact which has already been examined and found confirmatory of the view that the state of the atmosphere regulates very much the course of the epidemic.”

The facts adduced in this last extract by no means corroborate the assertion that cholera spreads in proportion to the facility and multiplicity of communications. If this

were the case, why should it happen (as it sometimes does) that one side only of a street is affected by cholera, and not the other, the intercommunication between the two sides being general? And, again, why should the disease in India be confined, during certain seasons, to certain localities?

Proof 6.

Proof 7.

Mr. E. W. Molony, Famine Commissioner at Cuttack, in his letter to the Government of Bengal (No. 844, dated 4th March, 1868), reporting on the outbreak of cholera which occurred at Pooree in October and November, 1867, writes thus:—"The disease did not seem to have been communicated to any extent to the inhabitants of the villages through which the pilgrims passed, though nine deaths in four localities are noted in Appendix C. of Mr. Raban's Report."

Proof 8.

Dr. J. F. Wise, Civil Surgeon of Dacca, reported in January, 1868, that "a few cases of cholera only were met with at the Baronie Mēla this year. Those all occurred between the 14th and the termination of the fair on the 18th December. It is estimated that only 7,000 or 8,000 persons resided permanently in the *chur*, a number much below that of average years. The disease did not spread at the fair, nor, so far as I can learn, at the homes of those attacked, and who were removed."

Proof 9.

How was it that during the years 1859, 1860, 1863, and 1864, there was an entire exemption of the prisoners of the Punjab from cholera, only one death from this cause having been returned? (*Vide* Dr. Bryden's letter, dated October 27th, 1865, to Dr. Norman Chevers, then Officiating Inspector-General of Jails, Lower Provinces). Was there no facility of communication here?

Proof 10.

In 1856, cholera was epidemic over the Lahore district during the first week of August, nearly two months before it appeared at Umballa, which, lying intermediate, was in direct communication with Delhi, Meerut, and Agra, where the disease had been prevailing for months before. The limit of the invading cholera of 1856, from the south-east, (one of the severest epidemics on record,) was at Jhelum. This cholera did not affect the stations of the frontier, nor did it enter the valleys of Peshawur and Kohat, until the end of October, 1858—*i.e.*, two years and three months after.

Proof 11.

In 1860, cholera invading from the east, up the valley of the Ganges, covered Oudh, the eastern half of the Dooab and Bundelkund; and, invading from the south-east, it covered all the districts to the south-east of an imaginary line drawn from Muttra westward (*i.e.*, an area including the Agra, Gwalior, and Jhansi Divisions). No case invaded the Meerut District, Rohilkund, or the Punjab, or even Delhi, during the year. The boundary was not over-stepped, either from the south or from the east, although free daily communication took place throughout those months, during which the districts before-named were universally infected by an invading, not a reproduced cholera; *i.e.*, by a mobile, not a localized cholera.

Proof 12.

Again, the cholera of 1861 (the reproduced cholera of 1860) was in full epidemic vigor until the first week of October. The Lahore district had

Proof 13.

been generally affected in the first week of August. There was, however, no case of cholera on the frontier until the 20th of April, 1862, when it appeared at Bunnoo (not the terminal extremity of the trunk road), and reached Peshawur in July, 1862—that is, *a year after* it had reached Lahore (Mean Meer).

I am again indebted to my friend Dr. Bryden for these facts. They clearly prove that cholera does *not* always spread in direct proportion to the facility of communications; and they show how, under certain circumstances, cholera epidemics are but little “subordinate to human currents.” (*Vide* p. 76, Report of the Commission).

Dr. C. Macnamara (in his 2nd paper on Cholera in the number of the *Indian Medical Gazette* for July, 1868, records the fact that “the

Proof 14.

enormous city of Moorshedabad appears, upon good authority, to have been entirely free from the disease during the year 1817, although cholera prevailed in every direction around it.”

In the same paper we learn that “towards the end of March the disease appeared at

Proof 15.

Allahabad, destroying 10,000 of its population, but the troops were not attacked by the disease until the middle of July. Nevertheless, they were in daily and unrestricted intercourse with the townspeople. Not a single case of cholera occurred within the precincts of the Jail, although 700 prisoners were confined within its walls, the convicts, however, working in the streets of the infected city during the daytime.” Again, in October, 1818, cholera pre-

Proof 16.

vailed at Bellray. “Of five hundred persons in the Jail only one was attacked, and he recovered.”

In his 3rd paper (*vide Indian Medical Gazette* for August, 1868, page 176), Dr. Macnamara quotes from Jameson regarding the outbreak of cholera on board the ship *Carnatic*:

Proof 17.

“It occurred only among the seamen, although between their condition and that of the soldiers on board there was only this difference, that they slept on the gun and the soldiers on the orlop deck. Some were seized who had no communication with the sick; while others escaped who constantly sat on their hammocks.”

In his 4th paper (*vide Indian Medical Gazette* for September, 1868), Dr. Macnamara cites further instances in proof of the fact that cholera does not spread in proportion to the facility of communication. The following extracts are appropriate:—

“In 1823, cholera broke out at Alexandretta, situated on the Gulf of Scanderoon, and

Proof 18.

re-appeared in most of the places it had visited during the preceding year, being also generated in several of the seaport towns on the Caspian; and in September, 1823, as far north as Astrachan. In June, 1823, cholera showed itself in the neighbourhood of Laodicia and Antioch, and then spread along the borders of the Mediterranean, but entirely disappeared again, both there and on the shores of the Caspian, towards the close of the year; nor do we hear of its reproduction, or, in fact, of its existence in these localities, from this time up to the autumn of 1829.

“It is certainly very remarkable that cholera should have been hanging about the territories bordering on the Levant for three years, with only a nominal quarantine to stop it, and ample means of communication open, through which it might have spread into Turkey and Europe, if human intercourse were the ordinary means by which the disease were propagated.”

“In the Madras Presidency many stations were again entirely free from cholera; it broke out here and there, as, for instance, in the 34th Regiment, which was encamped at the Mount near Madras, for the purpose of volunteering preparatory to embarkation for England.”

Proof 19.

“At the same time the disease was not prevailing in the fixed troops at the station, nor anywhere in the neighbouring country, except in the 54th Regiment, just arrived in India, and in the 53rd on its march. While the disease was prevailing in the 34th, a party of volunteers left it for the depôt at Poonamalee, eight miles distant. In the course of a week after their arrival there, twenty cases occurred in that party, but not one in the various other parties of troops previously there, though they were all mixed up together.”

“The Superintending Surgeon at Benares, on the 13th of May 1826, reports—‘that, in the city of Benares two or three hundred persons were daily carried off by cholera, and yet the troops and prisoners in the jail remained entirely exempt from the disease, which, nevertheless, was most severe all over the Benares division.’”

Proof 20.

In his 5th paper (*Indian Medical Gazette* for October, 1868), Dr. Macnamara, in carefully tracing the history of cholera, cites more examples like the above. Thus, while the disease raged in 1831, at Sunderland, “of one thing we are quite certain, and that is, the inhabitants of the populous village of Debtford, close to the Ayres quarry, where the disease was very prevalent and fatal, escaped its influence; as did the agricultural villages in the immediate neighbourhood of Sunderland.”

Proof 21.

Again, in the same year, “the village of Issy, situated on the road from Paris to Versailles, totally escaped, although surrounded by other hamlets, Vanore, Vangirara, Beau, Grenelle, which were all cruelly ravaged by the disease.”

Proof 22.

Apropos of the outbreak in Portugal at the beginning of 1833, Dr. Macnamara thus quotes, from the *Lancet* for November 22nd, 1834, the words of Mr. Lardner’s report:—“I know that the *Rainha* frigate in Vigo Bay, while at anchor alongside the *Donna Maria*, was severely attacked with cholera in its most malignant form, while in the latter (although free and constant communication existed between the two vessels), the disease never made its appearance.” Again, in 1837,

Proof 23.

“remarkable outbursts of cholera occurred during the year, at various places in Italy, Marscilles, Berlin, Prague and in England, at Coventry, and on board the *Dreadnought*. With regard to this latter instance

Proof 24.

Dr. G. Budd remarks that there was no trace of infection from foreign parts, or that the disease was propagated from one patient to another."

The Conference lays stress (p. 76) on the memorable fact of "the importation of cholera (in 1854) to the East, and its communication to the French army by vessels from Marseilles with troops on board, who had come from the neighbourhood of places where cholera had been raging."

In reply to this, it may be said: when cholera was prevailing in the valley of the Danube, it was scarcely necessary to infer that the disease was brought to the French army in the Crimea from Marseilles, as a special importation. It was already, as it were, the next-door neighbour to the army in question; and, therefore, speculations regarding its importation from a distance are almost superfluous and irrelevant.

The Commission (p. 74) lays down the opinion that "*pilgrimages are, in India, the most powerful of all the causes which tend to the development and propagation of epidemics of cholera.*"

Pilgrimage, *per se*, does not develope cholera.

I myself believe that pilgrimage, *per se*, does not develope cholera, the development and propagation of the disease being a fact entirely secondary to its endemicity.

The pilgrims come within the endemic, or it may be the epidemic, limits of the disease (perhaps it would be more accurate to say *condition*); and, as a natural consequence, they are subject to its action.

What are the facts? At Hurdwar, a place extraordinary almost beyond all others for the vast number of its pilgrims, *there was no cholera for ten successive years.* To my mind, this fact, taken quite by itself, settles the question that pilgrimages do *not* develope cholera. Rather, perhaps, might it be said that cholera is the result of certain atmospheric and telluric changes. Such changes, whatever be their exact nature, tend to the development of the disease. Once these changes occur, at favorable localities and seasons, large bodies of men, whether pilgrims or others, become the pabulum of the epidemic; and the more insanitary the conditions that exist, the greater—in a general sense—are the facilities of diffusion. Thus, then, a combination of circumstances produce cholera, comprising much more than is implied in the single word "pilgrimage."

I wrote as follows on this subject, some years ago:—

"I myself am inclined to believe that the cause of cholera is essentially *two-fold*: on the one hand, atmospheric; on the other, corporeal;—in other words, that before we can have cholera developed, a certain altered condition of the air is necessary, but that this of itself could never produce the symptoms of the disease without there previously being, in the

persons of the individuals affected, abnormal conditions, it may be of the blood, or of the centres of organic life, which are sometimes indicated by the term 'receptivity.' In the *Lancet* of October 31st, 1854, Mr. Headland, formerly President of the Medical Society of London, has happily expressed this view of the case :—"An atmospheric change," he remarks, 'co-operates with a systemic wrong; we need not define either, but we must admit their agency. Neither of these causes will suffice of itself. Thus, a bar of soft iron will not attract a bar of steel; but if we pass a galvanic wire around the former, converting it into a temporary magnet, it will acquire a power which it had not before. The iron and the electricity together will co-operate in effecting what either alone would be powerless to do.'"

"So is it with the two-fold cause of cholera. This doctrine, it is to be remarked, is one which at once stamps the necessity of extraordinary attention to the laws of health in individuals; whilst, at the same time, it renders absolutely imperative the duty of perfecting, as far as practicable, every public sanitary arrangement by which a healthful state of the atmosphere may be maintained unimpaired."

Cholera is not developed in consequence of the fact that many individuals are together performing pilgrimage, although it is sometimes (we may say frequently) developed *whilst* they are so engaged. The difference Season has much to do with the development of cholera. is a fine one, but it is of much importance. At one season of the year, a mass of pilgrims at a particular shrine suffer greatly from cholera, whilst the same kind of pilgrims—possibly the same individuals—meet in great numbers under many like personal circumstances, *at a different season*, at other places of religious or commercial resort, and they have no cholera amongst them.

As I have said, this was the case at Hurdwar for ten consecutive years.

This year, according to the *Delhi Gazette*, about 350,000 pilgrims were gathered together at Thanesur (in the Umballa District) to celebrate the occurrence of the eclipse, by bathing in the holy tanks of that city; yet we are told that "there were no cases of cholera."

Mr. Chapman, Commissioner of the Presidency Division, discussing this subject of pilgrimage, writes as follows :—

"I must add that, so far as the gatherings in these parts are concerned, I am aware of no facts which give any colour to the suspicion or suggestion of the International Cholera Congress. I do not think that there is any reason to suppose that cholera occurs more frequently at our local gatherings here than it does over the country generally." Mr. Chapman adds—"the up-country pilgrimages are a source of health."

Baboo Jotendro Mohun Tagore, in his letter to the Officiating Commissioner, Presidency Division, (dated Calcutta, the 14th December, 1867), writes thus: "I lately noticed in a North-West newspaper that at the late Gurmucktesur Fair *no less than 200,000 persons were assembled, but it was stated "not a single case of cholera or other epidemic disease occurred at the fair itself, or in the wake of the returning pilgrims."*

Baboo Degumber Mitter, writing on the same subject, (in his letter of 13th January, 1868), gives the following clear statement of facts:—

“8. (B.) Of pilgrimages there are two kinds:—1st, those that are undertaken at all times of the year; and 2nd, those that are held most meritorious at particular seasons. Of the first kind are visits to the temples of Benares, Mnthura and Brindaban, the pilgrimages to Guya for the performance of shrauds, and to Allahabad to cast the hair of the head in the holy confluence of the Jumna and the Ganges. For these all times are propitious, but for the sake of convenient travelling the cold weather, from October to February, is generally preferred. Many thousands proceed on these pilgrimages from Bengal every year, and cause considerable crowding in the towns and cities they visit; but under no circumstance can they be said to originate or propagate disease. The experience of centuries is adverse to such an opinion. On the contrary, it is universally believed in this country that such pilgrimages are peculiarly beneficial to health. Old and infirm people often resort to them with the express object of reviving their failing energies, and they are rarely disappointed. Nothing is more common than the sight of persons who leave Bengal diseased, weak, and emaciated, returning to their homes hale, hearty, and completely restored to their wonted health in the course of a short pilgrimage to Guya or Benares. In many instances recovery, no doubt, is attributed to religious merit, and the benign grace of the divinities visited; but the people are not unaware that the good they derive is due in a great measure to change, and the effect of travelling in a climate which to the majority of them is peculiarly salubrious. Under any circumstance, it is impossible to persuade them that such pilgrimages are injurious to their health, and should therefore be avoided.

“9. The 2nd class of pilgrimages, or those which require the devotees to be present at particular places on stated days, are not often found to be quite as beneficial as those mentioned in the preceding paragraph. It is a common practice in Bengal for people suffering from long standing chronic complaints, or who have recently recovered from them, to proceed, in fulfilment of vows, to Tarkeshur, in the Hooghly district, on the occasion of the Sevaratri holiday in February, or to other noted temples, and they return home generally *with marked benefit to their health*, and the number of radical cures effected by these pilgrimages is by no means insignificant. The crowd that assembles round the temple at Tarkeshur on the Sevaratri night, it is believed, includes 20 to 30 thousand persons, but rarely causes the outbreak of any epidemic disease. The same may be said of the pilgrimage to Baidyanauth in Beerbhoom, to Poreshnauth near Sheerghotty, and to the innumerable other temples and shrines to which people repair on particular occasions. In fact, however, the bulk of the people who assemble at those places come from the neighbouring villages and return home after a day's sojourn; in many cases persons come in the morning and return to their homes in the evening, repeating their visits on successive days till the close of the ceremony, which rarely take more than two or three days for its performance.

“10. There are some pilgrimages, however, to which the above remarks would not apply. They are performed at very unfavorable seasons of the year, and under circumstances which entail considerable hardship and suffering, and may lead to the generation of virulent disease. The pilgrimage to Juggernaut on the occasion of the *Ruth* festival in the month of June is

particularly open to this objection. Forty to fifty thousand persons generally assemble at Pooree at that time, and they are mostly in a condition peculiarly subject to disease. The way to Pooree is by land, and pilgrims have to travel from 150 to 500 miles to reach their destination. These have to submit to long and tedious marches over roads of the most primitive description and exposed to the most inclement weather, scorched for days in the burning Indian sun of June, and then drenched by heavy monsoon showers of many hours' continuance. The serais in which they have to put up, either on the way, or at Pooree, are miserable in the extreme, and the food supplied them is often unwholesome. Of medical aid they can have none besides what they carry with them. Under such circumstances great suffering, and often disease and death, are the necessary consequences. Nor are the people of this country unaware of this, but so strong is the religious fervour by which they are impelled to undertake the pilgrimage, that they undergo all the sufferings attendant on it with cheerfulness, and repeat their visits as often as they can afford the means and the leisure to do so. Privation on such occasions they look upon as a sort of penance calculated to enhance their religious merit, and it is hopeless to expect that persuasion alone will suffice to keep them away from such undertakings to any perceptible extent. They must be convinced by irrefragable evidence, either that they propagate disease, or that such pilgrimages are of no religious merit, before they will give them up, and this cannot now be afforded.

"Certain it is, however, that of the many thousands who annually return from Pooree to Calcutta in July, few can be said to have brought cholera with them. That disease, to the best of my knowledge, has never broken out epidemically in Calcutta in that month, and I have no doubt that my experience will be fully borne out by all who have studied the subject."

Baboo Rajendro Lall Mitter, himself a resident of Calcutta, unhesitatingly confirms the last important assertion. He says: "Certain it is that the pilgrims from Pooree who return in July never brought cholera to Calcutta, for, to the best of my memory, no epidemic of that disease has broken out here in that month within the last thirty years."

Mr. A. Money, Commissioner of the Sonthal Pergunnahs and Bhaugulpore Division, addressing the Government of Bengal, (*vide* his letter No. 192ct., dated Camp Bario, the 29th January, 1868,) reports as follows:—

Examples of pilgrimages which have not developed the disease.

"There is in this Division only one place of extensive religious resort—Deoghur—where, at the Seebrat, many pilgrims assemble, and one large fair at Carragolah, on the Ganges, District Purneah. No outbreak of cholera has been known to take place at these gatherings for the last three or four years, and no correct information is available for former years."

Example 1.

Mr. F. R. Cockerell, Officiating Commissioner of the Chittagong Division, in his letter to the Government of Bengal, No. 751, dated 18th November, 1867, reports regarding the "Sue Rattri Mêla," held annually at Seetakoond, the only place in his Division where any large fair or religious gathering occurs.

He writes :—"The Scetakoond fair is held in January, and lasts ordinarily about a week or ten days ; the concourse of persons frequenting the fair, who

Example 2. come from all other eastern districts of Bengal, rarely exceeds 2,000. There is no record of any virulent outbreak of cholera at these gatherings in past times, and not a single case would appear to have occurred during the last two years.

Colonel E. T. Dalton, Commissioner of Chota Nagpore, in his letter No. 292, dated 14th February, 1868, to H. L. Harrison, Esq., Junior Secretary to the Government of Bengal, reports as follows :—

"In reply to your No. 4102 of the 30th September, 1867, I have the honor to state, after careful enquiry, that at no time in this Division does it appear
Example 3. that cholera, breaking out as an epidemic, has been spread from assemblages of people at fairs or places of pilgrimage ; and though there is an old pilgrim road through the Division—the road to Pooree through Singbhoom—I do not find that visitations of cholera have sprung from disease introduced by the pilgrims.

"Great numbers of Jains from all parts of India sometimes assemble at Mudhoobun, to the north of the Parisnath hill ; but though many thousands visit the temples every year, there is no fixed season for the solemnity ; and this, by breaking up the aggregate mass of the devotees into comparatively small detachments, greatly diminishes the danger, both on the road and at the shrines, of epidemics.

"I do not find there is any instance of a bad outbreak of cholera amongst these pilgrims, or that the disease has been engendered by their
Example 4. passage through the country."

The following letter relates to the North-East Frontier :—

"From Colonel H. Hopkinson, Agent, Governor-General, N. E. Frontier, and Commissioner of Assam, to the Secretary to the Government of Bengal,—(No. 353, dated Gowhatty, 7th November, 1867).

"In reply to your letter No. 4102, dated 30th September last, I have the honor to state that from the reports of the Deputy Commissioners subordinate to this office, it appears that there are no large fairs or religious gatherings in any of the districts of this Division.

"The Deputy Commissioners add that a considerable number of people from the villages resort to the head-quarters of each station during the
Example 5. festivals of the *Behoo* and *Doorga Poojah*, but these gatherings at no station exceed from 7,000 to 8,000 persons, and have hitherto been unattended by any epidemic."

Dr. French writes thus of the Khettor Mêla held on the 17th, 18th, 19th, and 20th October, 1867 :—

1. "No cholera when they left their homes.

2. "There was no cholera at the place of assembly before the mēla opened.

Example 6.

3. "No cholera amongst the people during the mēla, whose number is estimated at 14,500.

"There is not any clear evidence that cholera broke out amongst people who had returned to their homes from the mēla, as a traceable result from their visit to the fair." (*Vide* letter from W. A. Green, Esq., Inspector-General of Hospitals, Lower Provinces, to the Secretary to the Government of Bengal, No. 654, dated the 12th February, 1868).

The above reports (which I could support with very many others) tend to prove that cholera does *not* spread in a degree proportionate to the facilities existing for its extension, or to the migrations of man and the direction of human currents. So far then we are forced to the belief that the connections regulating the diffusion of the disease may be of a *general* character, and not, in any way, of necessity involving human inter-communication. In so far as this is a truth, to that degree exactly is the coercive quarantining of individuals likely to prove inefficient. The development and determination of cholera being no mere personal thing, it is beyond the influence of limited restrictive regulations, however coercive they may be.

It may now be asked,—are not pilgrimages at least *predisposing* causes of cholera outbreaks? In so far as pilgrims are overcrowded, dirty in their habits, careless as to the drinking of contaminated water, weak in body, badly nourished, and depressed in spirits, to that degree undoubtedly are they predisposed to sickness and death, both from cholera and other specific diseases. The exciting causes are comprehended in the local and general conditions of places, in respect to soil, water, air, temperature, moisture, &c. Given a concatenation of certain conditions (very difficult to define it must be allowed) acting upon each other by a determinate and fixed law,—the result is cholera. My friend Dr. Bird has exactly apprehended this thought when we find him writing—

"We have hitherto been too prone to regard diseases as so many entities, instead of as so many conditions of our tissues, and in this way we have come to believe, in a vague sort of way, that many diseases propagate themselves after the manner of plants and animals, in place of looking on them as being developed anew under the stress of external circumstances." (Art. "Idiosyncrasy," p. 150).

Immediately afterwards he writes as follows regarding cholera :—

"A knowledge of the conditions necessary for its development in an epidemic form is still the chief element in the study of the affection. When we have acquired this, we shall understand why, when it has once invaded a country, it ever leaves it; why it travels westwards, from Asia and Europe to America, and not eastwards; how it advances against the winds; why it sometimes marches along one side of a street and avoids the other side; why

it sometimes slays one village and spares its immediate neighbour; why it once appeared murderously at Hurdwar Fair, where sanitary arrangements had been made with surpassing care as a protection against it, having absented itself from previous fairs at the same place, when no sanitary arrangements had been made at all; why isolated cases of the disease may occur all the year round in a country which is sometimes afflicted by it in an epidemic form; why, sweeping onwards like a stately shadow, it began its slaughter in Chicago at a time when men were dreaming that by their medical police they were keeping it at bay at New York and Boston; and how, two years ago, when we were expecting it at Southampton, it appeared at Epping Forest, swift and deadly as a stroke of lightning.”*

My friend Professor Fayrer, in his recent address at the annual meeting of the Bengal Branch of the British Medical Association, made the following observations regarding the origin of disease-conditions:—

“Professor J. H. Bennett has recently, in a lecture delivered before the Royal College of Surgeons in Edinburgh, expressed his dissent from these views of the origin of germs in relation to septic poisoning, and adduces arguments which, to say the least of it, are apparently as cogent as those of the physiologists whose theories he denies. Professor Bennett says: ‘They originate in oleo-albuminous molecules, which are formed in organic fluids, and which, floating to the surface, form a pellicle or proligerous matter. There, under the influence of certain conditions, such as temperature, light, chemical changes, density, pressure, and composition of atmospheric air, and of the fluid, &c., the molecules, by their coalescence, produce the lower forms of vegetable and animal life;’ and this process of development Dr. Bennett illustrates by the penicillium crustaceum, which, he says, is formed in this way. This is a question, in fact, of the molecular theory of organization, which inculcates that all the tissues are formed by the successive production of histogenetic or formative, and histolytic or disintegrative molecules. And as to the doctrine ‘omne vivum ex ovo,’ he says this expression is a formula, which only imposes on the understanding, checks the search after truth, and is already overthrown by the advance of science. ‘The notion of every particle being necessarily derived from its like is erroneous; the law of descent from parents, which we recognize in the higher animals, changes as we descend in the scale: first to *parthenogenesis*, whereby this direct descent is broken, and ultimately to *heterogenesis*, in which it is lost. This theory is certainly startling, and revives the question of spontaneous generation.”

These quotations show in what direction the minds of pathologists are now ranging; they further prove the vast importance of studying the *conditions* by which we are surrounded.

I have dwelt at some length on this consideration, because it is, in point of fact, the foundation of all sanitary science. We must continually combat the general conditions favoring the development of cholera—such conditions, I mean, as are beyond the possible reach of mere *quarantine*, which is a mere apology for progressive sanitation. I am bound to say I can but regard as an absolutely unhygienic measure, an apology for progressive sanitation, a mere make-shift—futile as it is vexatious, inefficient as it is unscientific.

* “I make this statement with a knowledge of the details of the Groombridge cases.”—R. B.

The Constantinople Commission quote (p. 81) the instance of cholera at Thoydon Wood, in Essex, in 1865. They write of it thus:—"It would be difficult to find a more conclusive case of cholera, contracted in an infected locality (Southampton), and imported into a healthy place (the house of Mr. Groombridge at Thoydon), where the disease spread itself exclusively among persons connected, more or less directly, with the diseased persons. There will be no mention made here of an epidemic influence hanging over the locality, since the epidemic, circumscribed, as it were, in one single house, showed itself nowhere else in the country. We are ignorant of the reason why the disease did not extend itself, as we are of many other circumstances; but what this fact establishes, without any other reasonable interpretation, is the transmission of the disease by connexion with people afflicted with it."

This is a case which it is peculiarly unfortunate for their argument that the Commission should have quoted, after laying it down as a law (*vide* p. 36) that *cholera spreads everywhere in proportion to the facility and multiplicity of communications*.

It must be allowed that considerable general communication was occurring, at the time alluded to, with Southampton, which was the infected locality, and also with the party of individuals at Thoydon Wood, who were also affected, and whose story is told at page 81; and yet, to quote the very words of the Commission, *the epidemic, circumscribed as it were in one single house, showed itself nowhere else in the country*; in other words, the extent of its spread was in no way "proportioned to the facility and multiplicity of communications." The truth is, the Thoydon Wood illustration proves, as many others besides it have done, that the disease was developed by the fact of there existing then a particular set of conditions related to each other in a particular manner, and not from the presence of any particular individual or individuals from Southampton.

The case is capable of illustration in a very homely way. The street lamps of Calcutta burn in direct proportion as light is applied to their jets—not in consequence of the mere presence of the lamp-lighter. We must remember that gas-lamps can and are now lighted from a distance by the influence of an electric spark, which clearly shows how the selfsame result can be produced, altogether independent of the immediate presence of man. So it is with cholera; *influences* are at work, and produce the condition cholera, quite independent of man's wishes or movements.

In connection with the Thoydon Wood case, the Commission adduce these facts:—

"The man Riley, who had been taken to his own house, sank on the 7th; a woman named Saville, who had nursed him and laid out the corpse, was attacked on the 7th, and died the next day. The disease spread no further.

It is to be observed that the taking of the man Riley to his own house afforded cholera facility for further diffusion, which, according to the law laid down by the Commission, it ought to have availed itself of. But such, we know, was not the case: "the disease spread no further." Again, *apropos*

of the case of the woman named Saville, I would simply ask how many persons have laid

The frequency with which those attending on cholera patients escape the disease. Authors quoted on this point, Macpherson, Martin, Twining, Jameson, Bruce.

out cholera corpses who have not died, or been seized by the disease? Dr. John Macpherson, whose experience of cholera in India could not but be very extended, in his work published two years ago, ("Cholera in its Home,") writes:—"It is scarcely

ever the case that the attendants who are employed to rub the extremities of cholera patients fall sick." "The sweepers who remove the excreta, and the washermen who wash the clothes, never suffered, although there was little or no employment of disinfectants. I have known of an orderly sleeping the whole night in the bedding on which a cholera patient had just died. I have never seen a medical officer or subordinate on duty in hospital attacked; although a Native assistant of mine once succumbed during an epidemic, which he was engaged in treating from house to house. For a series of 25 years at least, only one resident medical practitioner has died of the disease in Calcutta."

Sir Ranald Martin (Influence of Tropical Climates, 2nd edition, 1861, p. 513) writes thus on the same subject:—

"In the European General Hospital of Calcutta, in which I served as Assistant Surgeon and Surgeon, it was well known that, of the five native keepers and washers of clothes who had during twenty-five years kept and washed the hospital clothing, not one had cholera; nor had those who assisted them. The same immunity attended the native dressers, averaging from twenty to thirty men, who, during the same number of years, were in constant and close attendance on the cholera sick all day and all night; nor were the sweepers who washed and dressed the patients, and who removed the matters vomited and ejected by stool, ever affected with cholera.

"I served in the General Hospital in March, 1827, the time referred to by Mr. Twining, when the house was filled with cholera patients, and when all of us, Europeans as well as Natives, including Native medical students employed for the occasion, were exhausted with the labours of attendance on the sick; but none of us suffered from the disease.

"Out of some 250 to 300 medical officers, most of whom saw the disease largely, Mr. Jameson states that only three were attacked throughout the Presidency of Bengal, and one only of these cases proved fatal. The same circumstance held good in the Bengal Fusiliers in 1848, where, according to Dr. Bruce, not one medical attendant, European or Native, 'ever shewed the least symptom of cholera;' nor was there 'even a case of bowel complaint among them,' although numbering a hundred persons in constant attendance on the cholera-sick, 'from May till September.'"

After these statements we are in a position to appreciate the exact significance of the single case of the woman named Saville.

Quotation from *Edinburgh Medical Journal* against direct transmission.

A reviewer, in the pages of the *Edinburgh Medical Journal*, (*vide* the No. for February, 1868, p. 745) thus writes:—

"We have seen cholera patients treated in the same hospital-tents in India, just as we saw them in the wards of the hospital of St. Louis at Paris, and yet the disease did not

succeed in propagating itself to patients in beds a few feet off, while it was at that very time traversing whole continents, and crossing deserts and seas with a rapidity which the most virulent contagious malady never attained."

Cholera appears simultaneously
in distant places.

That the disease does simultaneously appear in distant
places is certain.

Southwood Smith tells us that it covered the whole of lower Egypt in five days (*Op-cit.*, pp. 30-31). Mouatt writes (*vide* his letter No. 301 T., to the Officiating Secretary to the Government of Bengal, of 31st July, 1868) :—" It has appeared simultaneously at places many miles distant, between which no direct human intercourse could be traced, and which were not cholera foci."

Macnamara records "that in 1817, about the 11th of July, we hear of the simultaneous outbreak of cholera in the districts of Patna, Mymensing, and Sylhet; the former situated to the extreme west, and the latter to the east of Bengal." In August, Calcutta was attacked, and some 4,000 of its inhabitants died; yet there was scarcely a case amongst the large number of prisoners in the Alipore Jail.

Jameson remarks "that so long as the epidemic was confined to the province of Bengal, it at once raged simultaneously in various and remote quarters." (*Vide Indian Medical Gazette* for July, 1868, p. 146).

"Corbyn, writing of the outbreak of cholera on board the *Mangles* in 1824, asserts :—" I was myself an eye-witness to the destructive operation of this disease (cholera) on board the ship *Mangles*, in 1814, on which I embarked for India. We had been at sea about two months, when it burst forth with awful violence." (*Vide Indian Medical Gazette* for August, 1868, p. 175).

For instances of the same sort I might refer to the International Commission's Report, p. 95; to Dr. John Macpherson's work, p. 25; and to Baley's Report, p. 152.

Again, in the October number of the *Indian Medical Gazette*, p. 222, I find the following :—

"The Mediterranean fleet suffered considerably, the first cases occurring in June. In some of the ships the earliest attacks were said to have occurred as they neared the coast, and before entering the harbour or communicating with the shore; Malta had been kept strictly under quarantine both before and after the outbreak of cholera."

Lastly, in Dr. Cunningham's Report on Cholera in Northern India in 1867, we find the following (p. 91, para. 214) :—

"The other districts of Lower Bengal do not call for any special remark. General testimony is borne to the fact that cholera was less prevalent in 1867 than in ordinary years, that *its appearance was generally simultaneous at different parts of the same tract of country, and that any attempt to account for its course, either by the direction of the wind, or by communication, in most cases altogether failed.*"

Cholera in other parts of Lower
Bengal.

The International Commissioners themselves are obliged to allow (p. 86) that "it has not been possible everywhere to demonstrate the previous communication between an infected place and one subsequently attacked."

I believe that cholera has fixed and regulated periods for its appearance, spread, intensity, subsidence, and disappearance, which are determined by *certain and unvarying laws*, much broader in their character than considerations of mere personal inter-communication; Cholera is regulated by certain fixed laws which are not under the control of quarantine. its visitations come to a period in accordance with such certain laws, and quite independent of the existence or non-existence of quarantine, and, what is still more wonderful, it might even be said independent of a continuance of the most insanitary local conditions. This last fact seems to prove, as it were, that an inevitable law, in due time, drags cholera away even from those very conditions which most favor its appearance, diffusion, and re-appearance. It is *very* important indeed that this idea should be seized. Capricious as cholera may seem at times to be, it is but our ignorance that makes it appear so. Never, in the nature of things, can it swerve a hair's breadth from the influence of the *fixed and certain* laws by which its manifestations are regulated. As flowers, tides, seasons, display their allegiance to the fixed order of invisible influences, so it is certain does cholera appear and disappear, in strict obedience to a pre-determined order of specific conditions. Under definite circumstances, it is circumscribed to distinct areas, beyond which no human transmissibility can convey it; further, such circumstances are incapable of variation; they are the same throughout all time.

Colonel Hopkinson, Agent to the Governor-General, North-East Frontier, and Commissioner of Assam, in his letter No. 331, dated Gowhatty, 15th October, 1867, to the Secretary to the Government of Bengal, states that "the annual recurrence of cholera as an epidemic at Gowhatty, in Assam, may be as confidently looked for as the periodic rise of the Brahmapootra."

Dr. Bryden, in his letter to the Officiating Inspector-General of Jails, Lower Provinces, dated Calcutta, October 27th, 1865 (already quoted), writes as follows :—

"The statistics of the Jails of the Gangetic Provinces have an aspect widely different from those of Rohilcund or the Punjab. In the first, a minimum of mortality is the exception, a maximum the rule; in the latter, a minimum is the rule, the maximum the exception; if one year in five is an epidemic year in the west, in the east one year in five only may be regarded as a non-epidemic year; if cholera has visited Bareilly Jail once in ten years as an epidemic, for thirty years consecutively it has never been absent from the Jail of Patna."

My friend, Dr. Charles Maenamara, is at present doing the medical world a great service by the publication of a most important series of papers on cholera in the *Indian Medical Gazette*. He there traces, with great care, the history of the scourge in past times, and condenses, in a masterly manner, the literature of his subject.

Dr. Macnamara believes that "Hippocrates and Galen were witnesses of the existence of cholera in their day."

He adduces records which seem to prove beyond doubt that an epidemic of cholera prevailed at Goa in the spring of 1543.

He traces the existence of the disease during the 17th century, not only in the East, but also in London. He explores its written history during the 18th century in a most instructive manner; and he arrives at the conclusion that "it was nothing new for cholera to spread over India in an epidemic form prior to 1817 and 1819." The subsequent story of cholera in India, and elsewhere, is also being minutely worked out by Dr. Macnamara. All that he has written goes to prove that the disease originates under certain fixed conditions, and spreads according to definite laws.

There is no such thing as radiation of epidemic cholera in India. Its course in every recurring epidemic is definite, and it can now be foretold by those who have sufficiently studied the history of all past visitations in India. It is never recurrent. West of the Bay of Bengal, cholera is propagated either from east to west or from south-east to north-west; whilst again to the eastward of the Bay of Bengal it passes from west to east or from south-west to north-east.

The expression of such an opinion as this by no means tallies with the following statement made by the Constantinople Commission at p. 75 of their Report:—

"Cholera has never, in its progress, preferentially taken, as believed by some, a fatal direction from east to west; but, on the contrary, it has radiated and radiates in India in every direction, to the south as to the north, to the east as to the west, spreading itself everywhere in consequence of the facility and multiplicity of its communications. Those who think otherwise have not studied the facts, and reason as the Chinese would do, who pretend that cholera invariably proceeds from west to east." *And so in point of fact it does—to the eastward of the Bay of Bengal.*

Dr. C. Macnamara, tracing the spread of the disease in former years, thus writes:—

"In the meantime, cholera had extended both southward and eastward of India, Ceylon, Arracan, and the Burmese empire being under its influence in 1819. During the following year the country of Siam was absolutely devastated by cholera; it appeared about the same time in Malacca and Singapore. It broke out with great violence in the Phillipine Islands, principally at Manilla.

"We hear of it throughout the years 1820 and 1821 in China, Batavia, and Java, but it is impossible to trace the epidemic over this vast area, the information I have on the subject being principally derived from the "Calcutta Journal" and other local papers of the period."

Intellectual blindness is not so prevalent in the celestial empire as the Commission would have us believe, the simple fact being that our Chinese friends have for long been familiar with a perfect truth regarding cholera which the International Conference has not yet been able to appreciate.

The course of cholera may be affected by rivers, mountains, and deserts; but setting the collateral power of these aside, the law of propagation is definite; and I have already endeavoured to prove that the disease does not "*spread everywhere in consequence of the facility and multiplicity of its communications.*"

"Epidemic cholera," writes Dr. Bryden, "is never in any case spread over a definite geographical area by human intercourse alone; *nor can human agency cause the boundaries of a natural province, which has been occupied by cholera, to be transgressed, so that a cholera epidemic from this source shall appear in the province immediately adjoining, and become diffused among its inhabitants.*"

In this opinion I entirely agree with Dr. Bryden; and I believe many others in this country do so. Thus it will be observed that we in India respectfully differ, in certain important points, from the Constantinople Commission, and this even at the risk of being classed in the same category with that out-of-the-way and puzzle-headed people—the Chinese!

The endemic limits of the disease are probably not extending.

The strictly endemic limits of cholera in this country are probably not extending. The Commission writes at p. 67 :—

"Finally, it would be interesting to know if in India there are regions or localities which, up to the present moment, have shewn themselves refractory to the propagation of cholera."

I believe it may be said that, to a certain degree, every part of India, not within the endemic limits proper, is more or less refractory to the propagation of cholera. Such localities are subject to epidemic visitations, and to re-invasions of the disease; but this is all. The general circumstances relating to them do not, so far as we know, ever develop cholera; they are merely capable of admitting of its existence for a time, after which it, of necessity, ceases. Herein lies the yet exactly unascertained difference between an endemic and a non-endemic area.

In the lately published Report, by the Sanitary Commissioner with the Government of India, "*on the Cholera Epidemic of 1867 in Northern India,*" we glean certain facts well worthy of remembrance regarding places which have apparently been more or less refractory to the influence of the disease. Thus, at page 42, we find that before 1867 the Rohtuck District had for three years been free from the disease. At page 50 it is noted regarding Simla: "the disease is said to have been entirely unknown in the Sanitarium for at least ten years." I have myself good reason for believing that this is not quite a correct fact, as cholera was at Simla in 1862; it is nevertheless not far from the truth. At page 61, we learn regarding Mooltan that "the last epidemic of the disease which had broken out occurred twenty-three

years back," and this in spite of the most filthy local conditions. Again, at page 63, we find that before 1867 the district of Jhung, "it is said, had been free from cholera for five and twenty years." Lastly, at page 66, it is recorded that previous to the last epidemic, "the cantonment of Peshawur had been free from cholera for nearly five years."

At p. 71, the Commission writes:—

An important concession made by the Cholera Conference.

"We do not know the special conditions under the influence of which cholera is originated in India."

As I stated in my former memorandum on "Quarantine as applied to Pilgrims during visitations of Cholera," this confession is, I apprehend, in itself a good reason for discarding quarantine.

The Commission makes a further concession at p. 89:—

Another concession against direct infection. *it is to determine precisely what is the part played in importation by such or such a choleraic arrival."* This again strengthens the argument against the absolute necessity for quarantine.

As I wrote in my former Report, in guarding the safety of the masses, we must think of numerous conditions far different from those which involve the mere narrow study of the relation of one individual to another. The theory is untenable that cholera is disseminated only by direct human intercourse. The history of many past visitations of the disease in this country goes to prove that it may and has spread from place to place faster than man has travelled. I entirely concur with Colonel Malleson when he writes—"A consideration of the practical measures which ought to be adopted in order to carry out the recommendations of the International Congress for the extinguishing of the endemic foci of the cholera, involves the whole question of the general sanitary administration of the country." Nothing can be

Quarantine is but a part, and at best but a very questionable part of general sanitary administration. *more true than this. Mere quarantine, however, is but a part, and at best but a very questionable part, of such general administration; and I cannot but think that to bring fresh*

legislation to bear on this point would, in India, be a grievous mistake on the part of the legislature. Cholera does not spread as genuine contagious diseases do. A case of typhus

Cholera does not spread as genuine contagious diseases do. *fever (although of endemic origin) will, if carelessly allowed admission into a general hospital, produce its like until almost all who can be attacked are attacked. Puerperal fever*

does the same; so does hooping-cough, and measles, and scarlatina. They all continue to exert their directly infecting power—steadily, indiscriminately, and universally. Again, how many unvaccinated persons escape small-pox, when exposed to the disease while it is raging epidemically? An exceedingly small proportion. It is by no means so in the case of cholera, which is sometimes, *so far as limited localities are concerned*, partial in its distribution, irregular in its spread, and often sudden in its disappearance. Individuals near the persons affected are *not* necessarily attacked in a much greater ratio than those not so situated (this, as

already shewn, has been conclusively proved by the observations of Annesley, Twining, Martin, Macpherson, and others) ; and, again, segregation of the healthy from the sick does *not* necessarily afford immunity to the former. The practice of keeping ships in quarantine for cholera has proved futile in every country. It affords no certain protection either to seaports or to inland places. *Cordon* regulations have been found equally futile ; in spite of these vain trammels, the pestilence stalks where it will, devastating capitals and decimating armies. The stringent *guardas* of the Spanish Government failed to exclude it from Cuba ; and all the precaution that human ingenuity can devise is of no avail as a sure prophylactic. Thus then we can (as yet) no more, with certainty, avert by quarantine the spread of cholera than we can stay the course of planets in their orbits, or check tornadoes and cyclones. But, on the contrary, with purely contagious disease, barriers *are* possible. They can, to use a popular professional expression of the day, be “stamped out.”

Dr. C. Macnamara on the inefficiency of quarantine.

Dr. C. Macnamara, sketching the history of cholera in Russia in the year 1831, writes as follows :—

“ In St. Petersburg, the first case of cholera occurred in June ; the direction of the wind from the 1st of June to the 31st of August having blown 51 days from the east, 32 westerly, and 9 days variable. Every available means were employed to surround the city by a sanitary cordon, the whole power of the Emperor being exerted to prevent infected persons from entering the capital, but without the slightest effect ; at its appointed time, the disease was generated throughout the city, and continued its work of destruction during the months of July and August.”

The same author, alluding to the results of coercive precautions taken by the Spanish Government, writes thus :—

“ In Spain quarantine was most rigorously enforced. Every traveller from an infected district was subjected to the performance of quarantine ; and if he entered Spain without having gone through the formality, he was liable to be punished with death, his apparel burnt, and goods seized ; the same punishment being extended to those who received him. In spite of all these precautions, cholera raged with great violence in many of the provinces of Spain during the summer of 1833 and 1834.

Lastly, Dr. Macnamara sums up, very emphatically, against quarantine and cordon regulations, as will be seen from the following interesting passage taken from the *Indian Medical Gazette* for October 1868 :—

“ We cannot dismiss this period in the history of cholera from our consideration without noticing one or two of the most marked instances advanced as evidence for or against the doctrine of contagion, for the battle on this subject commenced with the appearance of cholera in Europe, and has waged with more or less violence ever since.

“ In the first place, I may observe that there was probably never a greater effort made by the combined Governments of Europe to exclude an epidemic disease from their dominions by quarantine than that exercised in the case of cholera of 1830-31. I have already noticed

the fact that in Spain, in 1833, an infringement of these laws was punishable by death. In our own country, among the various instructions issued by the Board of Health in London, the following will give us an idea of the means by which it was hoped, in October, 1831, to stay the progress of the disease in England :—‘ Immediately separate the sick from the healthy,’ conspicuous marks on infected houses ; ‘ rags, papers, old clothes, and hangings to be burnt ;’ ‘ dead to be buried in the vicinity of the houses selected for cholera patients ;’ ‘ all persons employed about the sick (including the doctor, of course), to be kept apart from the rest of the community ;’ ‘ all articles of food to be placed in front of infected houses, and received by one of the family after the person delivering them shall have retired ;’ ‘ all intercourse with an infected town and the neighbouring country to be prevented ;’ ‘ troops, or a strong body of police, to be drawn around infected places, so as utterly to keep the inhabitants from all intercourse with the country.’

“ It is true that in very many instances the strictest possible internal quarantine did not succeed in excluding cholera. That such should be the result of attempts at land quarantine by sanitary lines in the populous parts of Europe, accustomed to the utmost degree of daily intercourse, cannot appear surprising. To look for the rigorous enforcement of quarantine in such circumstances, has always appeared to us a very vain and weak expectation. And accordingly in Russia, Austria, and Prussia, where unlimited command of troops, and the despotic nature of the governments, present great advantages for the establishment of internal quarantine, the sanitary lines have been everywhere overstepped by the disease again and again after it had reached the more civilized parts of Europe. As, for instance, in the case of Debrenzyn, in Hungary, which suffered more than any other town in the country, although guarded by a triple cordon.

“ The greatest efforts were made to keep the cholera out of the Russian capital, by means of quarantine ; but, as usual, these having signally failed, a strong double cordon of troops were still maintained around Larcozels and Peterhoff, to which the court and nobility, with their attendants, in all 10,000 persons, retired, and resided in seclusion (among them, I am sorry to say, were two English physicians.) In the beginning of October, the restrictions were withdrawn ; and it was accurately ascertained that not a single instance of the disease had occurred within the enclosure, though it raged in all quarters around in the close vicinity of the lines.

“ Kristofsky, situated in the middle of the populous islands of Petersburg, and which communicates with them by ten magnificent bridges, and with the town by a thousand barges, which bring every day, and especially Sundays, very many people, who go to walk in the beautiful island, we say, has been completely preserved from cholera ; there has not been a single patient in the three villages which it contains. During the cholera, most of the French players retired to Kristofsky, and not a single patient was found among them ; while out of the small number of their companions who remained in town, many either died from the disease, or were seized with its most violent form.

“ On the St. Lawrence, immediately opposite to Montreal, and within a very short distance of the city, is a small island called St. Helena. Immediately, upon the breaking out of cholera at Montreal, the authorities removed the military to St. Helena. The people

from the island went every morning to the city to make their bazaar, and mixed with the inhabitants of the infected city; but, notwithstanding this daily constant communications, there was never one case of cholera in the island during the whole time."

In his late Report on the sanitary condition of Gibraltar, with reference to epidemic cholera, in the year 1865, (which Report was addressed to the Right Hon'ble the Secretary of State for War, and presented to both Houses of Parliament by command of Her Majesty, August, 1867,) Dr. John Sutherland writes as follows :—

"*Lastly*.—The inhabitants of Gibraltar have had practical experience of the inutility of quarantine restrictions in protecting them from epidemic diseases, and they are now incurring a large outlay for drainage, water-supply, and general sanitary regulation. They are doing this under the enlightened conviction that the best way to protect themselves against epidemics is to remove the local causes with which those diseases have always hitherto connected themselves. But after they have incurred the cost of these improvements, their commerce during epidemic seasons will still be at the mercy of States whose only faith is in quarantine. The question naturally arises, as to whether it is not possible to press on the attention of these States the undeniable fact that the only result of quarantine in time past has been to lull the people into a security at once false and fatal, by turning their attention away from the real sources of danger, and that the only safeguard of nations from pestilence lies neither in cordons nor in quarantine, but in works and measures for removing local causes of disease."

Dr. F. J. Mouat, Inspector-General of Jails, Lower Provinces, in his letter to the Officiating Secretary to the Government of Bengal, dated Alipore, 26th October, 1867, on the subject of quarantine, arrives at the following conclusions, (*vide* p. 18) :—

"That quarantine, as carried out by despotic Governments with far more rigour and exactness than can be attempted in India, has failed utterly as a barrier against the introduction of (cholera) wherever it has been tried.

"That it is a mischievous measure, as it tends to increase the fears incidental to the disease; and thus to render those not attacked, more liable to attack, and those attacked to a feeling of hopeless despondency, than which nothing can be more fatal in disorders characterized by great vital depression.

"That it is a costly measure, and that the money spent upon it is thrown away.

"That no further trial of the efficacy of quarantine in cholera is needed to shew that it is utterly and absolutely powerless.

"That our efforts in the future investigation of cholera should be directed to the discovery of its causes, and to the best means of treating it; and that these efforts should not be diverted to a repetition of (preventive) measures which are not preventive, and which appear to increase instead of diminishing the mortality from the disease."

They are corroborated by the views of Tardieu, Baly, Williams, Wood, Jameson, Annesley, Orton, Twining, Morehead, Macpherson and Goodeve.

Dr. Mouat quotes, in corroboration of his views, the opinions of many very high authorities. Amongst others, Tardieu, Baly, Williams, Wood, Jameson, Annesley, Orton, Twining, Morehead, Macpherson and Goodeve.

I hope he will excuse my extracting a few of these, so as to give a certain completeness to my present argument. Dr. Wood of Philadelphia, the known author of a valuable work on the Practice of Physic, writes thus :—

“ The strictest quarantine regulations have often signally failed. The disease has laughed at walls, guards, and legal penalties.”

“ When the disease invades cities, it very generally attacks individuals in quick succession, at distant points, and without any previous communication. Thus it acted in London in 1848, in Philadelphia in 1849, and in Memphis in December, 1848.”

“ In the summer of 1853, I was in Stockholm ; and at that time there was not a case of cholera in that city, or, so far as was known, in all Sweden. It had, however, reached the opposite coast of Finland in its westward march from Russia. The most rigid quarantine regulations were inflexibly enforced to prevent communication with the places where cholera prevailed, sufficient to exclude any contagious disease, even small-pox. I had occasion to leave Sweden and was absent for a month in Russia, and other parts where cholera more or less prevailed. On my return, though the steam-ship in which I was a passenger had no case of cholera on board, and had never had any, yet, as she came from a Prussian port supposed to be infected, she was placed in quarantine in the bay more than twenty miles from Stockholm, and none of the passengers were allowed to go beyond the limits of a small uninhabited island, which constituted the quarantine ground. Here I remained till the ship returned to Prussia. Yet at the very time cholera had broken out in Stockholm, and soon raged with great violence. It had passed over the gulf directly from Finland, wholly regardless of the legal obstacle.”

Tardieu, as quoted by Dr. Mouat, writes as follows :—

“ The first appearance of cholera in Europe was marked, in nearly every European State, by sanitary measures of extreme severity, all inspired by the false doctrine of contagion. The most rigorous quarantine, isolation, and sequestration, were established—measures as vain as they were tyrannical, against which the instinct of the people, and the liberal spirit of some Governments, particularly that of Prussia, soon rebelled. Now-a-days (1862) the inutility of these measures is acknowledged even in the places where they were most rigorously practised ; and quarantine, with sanitary cordons, should fall into well-merited oblivion, as no longer deserving a place in the preventive measures applied to epidemic cholera.”

Again, Tardieu thus quotes from the Report of the French Minister of Agriculture and Commerce, referring to the fears entertained at Marseilles of the possible importation of cholera from Tunis or Malta where the disease had appeared :—

“ It is impossible to proclaim too loudly that this fear is in no way well-founded, and that experience acquired in France and other European countries has long demonstrated

the impotence of quarantine and sanitary cordons to arrest the progress of the epidemic. In France, in 1831, and the beginning of 1832, the severest preventive measures were taken against communication with countries attacked by cholera. The inefficacy of this prodigality of precaution, which cost 6,00,000 francs to the public treasury, besides considerable sums to commerce, is well known."

I find that Dr. Baly, in his valuable report, of which I have already made such free use, arrives at the following conclusion (*vide* p. 228) :—

"Quarantine can no longer be adopted as the means of preventing the entrance of cholera into England; for it is incompatible, with the present state of commercial intercourse, and with the well-being of a commercial country. Moreover, quarantine has undoubtedly often failed of its object."

I venture to take another extract from Dr. Mouat's letter, the arguments of which pass, like telling lance-thrusts, through the recommendations of the quarantiniists, leaving in their hands but a shabby garment wherewith to clothe their antiquated theories which have, at best, but poor legs to stand on :—the result being a sorry spectacle at which we do not smile, simply because even old theories, like aged beings, in the abstract, demand respect :

Dr. Williams, the senior physician of St. Thomas's Hospital, in his classical work "On Morbid Poisons," thus sums up his remarks on preventive measures in cholera :—

"It will only be necessary now to add, that every preventive means founded on the principle of contagion has totally failed. In Moscow many persons furnished themselves with a stock of provisions, lived 'shut up' in chambers filled with chlorine gas, yet were seized with the disease. Respecting cordons and quarantine regulations, Russia tried them amply and in vain. In Austria, the cordons round Vienna nearly occasioned a civil war. The king of Prussia, in a proclamation dated Charlottenburg, September 6th, complains, 'that the Asiatic cholera had penetrated into his dominions in spite of measures the most vigorous, vigilance the most sustained;' and he adds, 'the vigorous measures of isolation by cordons established on the frontiers and in the interior of the country have hitherto acted unfavorably on the industrious habits of my people, and threaten, if they be maintained much longer, to destroy the comfort of families; and, in short, to become more ruinous than the malady itself.' The experience of Naples was equally unfortunate. It is remarkable that Hanover, which early abandoned, or did not adopt this system of quarantine, almost entirely escaped the disease."

The remarkable case of Naples is thus described by the same authority :—

"The city of Naples, so celebrated for the classical beauty of its site, and the transparency of its atmosphere, is a remarkable instance of the inutility of precautionary measures in preventing the introduction of cholera. The Neapolitan Government, alarmed at its approach, surrounded the city with military cordons, and adopted the severest system of quarantine. The city nevertheless was infected, when the Government thought that, by redoubling their efforts, they might extinguish a disease they had so powerlessly attempted to repel.

"The patients, therefore, without reference to class or condition, were pitilessly torn from their beds, and carried to a distant hospital, appropriated to cholera patients only; while the physicians, the relations, or whoever might have attended them, were sent to a Lazzaretto on the coast about three miles from Naples. All the precautions usually adopted in the plague were put in force, and the physicians traversed the street covered from head to foot with a black sack of waxcloth, into which two pieces of glass were inserted to admit light. These measures, so terrific, alarmed the inhabitants, and in a few days 30,000 persons had left the city. The populace beginning to rise, the king found it necessary to walk through the streets where the disease raged with the greatest violence—to eat of the bread which was believed to be poisoned—to visit the cholera hospital, and at length to *suspend the Committee of Health, and all their regulations*, so that the cholera patients were subsequently taken care of at their own houses."

We naturally ask: have then kings made proclamations, visited cholera hospitals, eaten suspected food, and vigorously condemned quarantine, all to no purpose? Is the experience of the past to have no weight with us?

In the face of the above proclamation by the king of Prussia, and with a knowledge of the opinions of such high authorities as have now been adduced (the number of whom might, with great ease, be added to), I confess I have no slight difficulty in surmising upon what grounds the International Conference have felt justified in making the following assertion (*vide p. 8*):

Quarantine would certainly be very prejudicial to industry and commerce in India.

"All the world is agreed that measures of quarantine are, after all, considerably less prejudicial to industry and commerce than the invasions of cholera and their consequences."

It is very evident that the king of Prussia did not think so; that the many well-known and wise men from whose writings I have quoted did not think so; that, in fact, the perfect agreement in opinion of all the world on the subject of quarantine against cholera does really not exist, except in the imagination of the members of the International Conference.

Were it necessary still further to dwell on the point, we have only to remember that very lately a most powerful body of Members of Parliament in England, and of leading sanitarians, have, in a special memorial, petitioned the Lord President of the Privy Council to allow a Royal Commission to be appointed in England for the purpose of considering anew the whole subject of quarantine, *i.e.*, since the rulings of the Constantinople Conference on the subject have been published. As I wrote in my former memorandum on this subject: "I would presume to remark that should a Royal Commission be so appointed, it appears very desirable that India should have a representative on such a Commission in the person of a specially selected Medical Officer of Her Majesty's Indian Service."

The important relation between meteorological conditions and the prevalence of cholera has been particularly insisted on by Dr. John Macpherson, whose Tables and remarks, under this head, appear to me to be of especial interest.

The relation between meteorological conditions and the prevalence of cholera.

He concludes the 1st chapter of his work ("Cholera in its Home") with these words :—

"We have now ascertained what is by no means generally admitted by the principal authorities on the subject, that atmospheric changes, as indicated by temperature and rainfall, have the most marked influence on the diffusion of cholera, and possibly on the mortality it occasions."

The information with which we are furnished by Dr. Macpherson is presented to us with such conciseness and precision, that it would be difficult to summarize it more shortly than he has done. The facts are of such deep importance, that I will therefore take the liberty of reproducing a somewhat long extract from the work alluded to. The said extract, in my opinion, conveys a vast deal of knowledge regarding the nature of cholera,—showing how far it is subservient to regular laws, and particularly to seasonal changes ; in other words to conditions much more comprehensive in their nature than the migrations of man, or the pilgrimages he may undertake.

The following are Dr. Macpherson's facts regarding the parallelism between the prevalence of cholera and certain definite meteorological states :

"TABLE NO. I.—*Showing Deaths from Cholera for 26 years and from Small-pox for 29 years, &c. &c.*

	Cholera.	Small-pox.	Rain fall.	Average temperature.	Range of temperature.	Prevailing winds.
			Inches.			
January	7,150	1,425	0·21	63·4°	17·9°	N., N. E., N. W.
February	9,346	2,845	0·42	74·2	17·3	N. N., E. N., W.
March	14,710	4,934	1·13	82·9	16·3	W., S. W. S.
April	19,382	4,249	2·4	86·6	14·7	S. W., S. W.
May	13,335	2,261	4·29	89	13·3	S., S. W.
June	6,325	1,054	10·1	86·2	9	S., S. W.
July	3,979	555	13·9	84·1	6·4	S., S. E., S. W.
August	3,440	223	14·4	82·6	5·2	S., S. E., S. W.
September	3,935	188	10·4	83·8	6·6	S. S. W., W., N. W.
October	6,211	147	4·72	81·1	8·8	W., E., S., N. W.
November	8,323	132	0·90	75·4	14·2	N., N. E., N. W.
December	8,159	576	0·13	66·9	16·4	Ditto.

"Though cholera, as we have seen, is never absent from Calcutta, yet it has very strongly marked seasons of maximum and of minimum prevalence. If we take the simplest division of the Bengal year, we find that—

Seven dry months yield 80,405 deaths.
 Five wet months yield 23,890 „

Or the dry months produce about three and one-third times as many deaths as the wet ones. The great phenomena of the seasons are the amount of rainfall, the average temperature, and the range of temperature.

The average monthly rainfall in the dry months is . . . 1·32 inches.

The average monthly rainfall in the wet months . . . 10·70 „

So that we have at once a very marked difference of conditions, the monthly rainfall during the wet months being 9·38 inches more than in the dry.

The average monthly temperature of the dry months is . . . 78·2°

The average monthly temperature of the wet months is . . . 83·48°

So that the average monthly temperature of the wet months is 5·28° higher than that of the dry months.

The monthly range of the thermometer is, in the dry months . . 15·7°

The monthly range of the thermometer is, in the wet months . . 7·2°

The monthly range in the dry months is therefore 8·5° greater than in the wet ones.

It appears, then, that the dry months have the greatest range of temperature, while the wet have the greatest rainfall and the highest average temperature.

But by carrying out the analysis further, perhaps some still more positive results may be reached, as represented in a tabular form.

TABLE II.

						Deaths.	Average tempe- rature.	Range of tempe- rature.	Rainfall.
									Inches.
Hot—	March,	April,	May	...	...	47,929	86·16°	14·7°	2·68
Wet—	July,	August,	September	...	...	11,354	83·5	6·06	12·9
Cold—	November,	December,	January	...	...	23,632	68·63	16·1	·413
Transition—	February,	June,	October	...	...	21,882	80·5	11·7	5·08
Transition months in detail.	{	February	...	...	...	9,346	74·2	17·3	0·42
		June	...	...	...	6,325	86·2	9·	10·1
		October	...	...	...	6,211	81·1	8·8	4·72

In this Table the year is broken up into four seasons, three of which are natural divisions, but the fourth is arbitrary, and is made up of the transition months, those in which there is change from the cold to the hot season, from the dry to the wet, and from the wet to the cold.

Three hot and dry months have	47,427 deaths.
Three cold and dry months have	23,632 „
Three hot and moist	11,354 „
While the three transition months have	21,882 „

From this it is clear that the three hot and dry months produce fully four times as many deaths by cholera as the three hot and wet months, and about twice as many deaths as the cold and dry months, while the cold and dry months slightly exceed the transition ones in their number of deaths. In what, then, do the most marked differences between the hot and dry, and hot and moist months, consist?

Not in the difference of average temperature, for it is only 2.66° in excess in the hot months, but *in the range of temperature*, which is 8.7° greater in the hot than in the wet months, and in the fall of rain, the monthly average of which is 10.3 inches greater in the wet than in the dry months.

The two most important agents in diminishing the prevalence of cholera appear, therefore, to be a heavy fall of rain, and *diminished range of temperature*. May we not assume that *the two great factors in the production of cholera are dryness of the atmosphere, and a considerable range of the thermometer?*

Mere reduction of temperature with dryness of the air are not sufficient to prevent cholera, for in the coldest and driest season we have twice as much cholera as in the rains; but then, in the cold season, there is a maximum range of the thermometer.

The transition months present, as might be expected, medium results: they do not, as a whole, produce as much cholera as the cold months, but they nearly do so. *As regularly as the season comes round there is an increase of deaths by cholera in February, a diminution in June, and then another increase in October; and these changes are usually in the latter half of the months.*

Of them, February produces most deaths; in this month the range of temperature keeps almost at its highest, 17.3° , and there is a sudden increase of 10.8° of average temperature. In June and in October the average temperature and average range differ much less from those of the preceding months.

I think the general result of our inquiry is very decided. *Dry air, with high temperature, and wide range of the thermometer, is most favorable to the development of cholera; while moist air with high temperature, and small range, is most unfavorable to it.*

Cold, and dry, and changeable weather occupy an intermediate place.

The above are facts well worthy of study. The balance between heat and moisture requires deeper scrutiny than it has received. The very suggestive propositions of Max. Pettenkofer have yet carefully to be put to the test in India. The results will, I believe, be of a very important nature. Everywhere throughout Bengal the varying depth of water in wells—as an approximative gauge of sub-soil moisture—ought regularly to be recorded.

I wish it to be understood that I do not deny the possibility of pilgrims being accessory to the spread of cholera. That they are so, however, does not prove the *contagious* nature of the disease, inasmuch as the *essential* conditions of its development and diffusion are not subject to human intercommunication. All, therefore, that can be said of pilgrimages in this respect resolves itself into the fact that they contribute their share to the aggravation of cholera and other diseases, inasmuch as they are frequently had recourse to under almost every circumstance which we are led by experience to believe can possibly favor the development and propagation of the disease.

Were personal communication between individuals, beyond all doubt, the one and only way in which the influence of the disease could be extended, the most coercive quarantine might be regarded as a most justifiable and necessary preventive measure for adoption. But I have endeavoured to prove that the exact nature and peculiarities of the circumstances which permit of the creation of cholera foci are not within our knowledge; that they are not subject to the caprices and migrations of man; and that they are beyond the influence of quarantine: consequently, I am of opinion that the recommendations of the International Conference on this point should not be allowed to have effect in Bengal.

If the inhabitants of every encampment and village and town about which cholera is hovering, or in which it has appeared, were to be subject to restrictive detention, I see no limits to the hardships that would thus accrue; and if such a thing be possible as artificially and wilfully to *create* endemic fields of cholera, it appears to me that the enforcing of inland quarantine ought to have this effect.

There are few men to whom we are more indebted for giving an impetus to the study of Indian pilgrimage in its medical and sanitary bearings, than my friend Dr. H. C. Cutcliffe. His arrangements at Hurdwar in 1867 not only evinced great grasp of mind, but a power of organization most valuable under such circumstances. In spite of his efforts, and those of all the officers who eagerly co-operated with him, cholera appeared in the camp. This is a fact greatly to be deplored; but it is one of vast scientific interest, proving, in my opinion, that the *epidemic influence* was abroad, and that it invaded from the Eastward, afterwards to acquire greater force as it approached the Punjab.

The existence of the so-called germ or *contagium* of the disease was locally sought for in all directions, and Dr. Cutcliffe himself believes it to be not improbable that it was imbibed by the pilgrims whilst they were bathing in and drinking the horribly polluted water at the ghât. Dr. Mouat, again, tries to solve the riddle by the assertion that "all the conditions of cholera, according to Mr. Simon, were at once called into existence, *viz.*, excrement-sodden earth, excrement-recking air, excrement-tainted air,—and the result has been one of the most fatal outbreaks of cholera on record."

Dr. Cutcliffe meets this opinion in the following manner :—

“ As I have before pointed out, this assertion involves a question of fact, in proof or disproof of which I have submitted that evidence should be adduced. My testimony is that Mr. Simon’s expressions, as applied by Dr. Mouat to the Hurdwar Fair, are misplaced, and that nothing which existed at Hurdwar prior to the outbreak of cholera warranted the application of any such expressions; and, further, that the cleanly state of the encampment was, as a matter of fact, entirely at variance with what Dr. Mouat has described the state of that encampment to have been. I need scarcely remind you that Dr. Mouat was not present at the Hurdwar Fair, and that, therefore, his evidence on the subject is inadmissible. Dr. Mouat’s apparent argument stands thus :—*1st*, Excrement-sodden earth, excrement-reeking air, excrement-tainted water, constitute, according to Mr. Simon, *all* the conditions of cholera. *2nd*, *All* the conditions of cholera, as detailed in Proposition No. 1, were present at Hurdwar. *3rd*, Therefore cholera resulted at Hurdwar in consequence of the presence of all these conditions. The truth or falsity of the first proposition I leave to be judged by a reference to the original passage in the report of Mr. Simon, who, I submit, never predicated of cholera in the terms attributed to him. Of the truth of the second proposition, no evidence has been adduced. To prove its truth or falsity, the evidence of those who were actually present at the fair, at which Dr. Mouat was not present, must be obtained. I have already given my testimony on the subject. A conclusion deduced from two propositions, of which I submit that, for reasons which I have already given, neither is true, needs no comment.”

The keen contention between Dr. Mouat and Dr. Cutcliffe is instructive. It shows with what earnestness men of science in this country are still struggling in the cause of truth as regards the mystery of cholera. There is no lukewarmness here. The subject is far too serious for any but warm advocacy. We have not yet arrived at truth, but there is at least no indifference displayed by those who urge on the attention of science every fact or argument that may be turned to account in ridding India and the world of that scourge which, in the space of 20 years, in Calcutta alone, has accounted for a loss of nearly 100,000 souls; which in 1867 from amongst the ordinary population in Upper India proved fatal to 117,181 human beings; and which lately produced, in a single Battalion of a Queen’s Regiment, a mortality of 85.7 per cent of those attacked.

All that Dr. Cutcliffe has written regarding Hurdwar is most interesting and of great practical value. I regret that I cannot now (from this Report having already reached so great a length) enter more fully into a consideration of his views. On certain points of importance I differ with him. But in every respect his opinions are worthy of close study by all who are interested in cholera inquiries. His writings on Hurdwar are to be found in the three following documents :—

1. Hurdwar Report of 1867.

Published in North-Western Provinces *Gazette*, (with maps and plans,) dated September 11th, 1867.

2. A letter No. 64 to F. Williams, Esq., C.S.I.,

Commissioner, Meerut Division, dated October 11th, 1867.

3. A letter No. 1B of 1868, to Commissioner, Meerut Division, dated May 17th, 1868. (On the Hurdwar Fair of 1868, and containing remarks on the outbreak of cholera at the Fair of 1867).

Regarding the development of cholera at Hurdwar, in 1867, my own opinion is that it was generated by that peculiar combination of climatic conditions—solar heat, ground moisture, more than usually wide range of temperature, massing of human beings, and unavoidable defilement of locality which, in spite of all the admirably planned arrangements that had been made, of necessity produced cholera. The peculiar conditions of the air, but more particularly of the ground (as regards sub-soil moisture, which is an ever-varying element) had, I believe, more to do with the appearance of cholera, on the said occasion than anything else. It is this sub-soil moisture, with great heat, low levels, and alluvial soil contaminated by products of decomposition, that characterizes the “home of cholera.” It is probably when atmospheric heat and the telluric moisture bear a certain definite relation to each other, and when peculiar electrical states exist, that cholera comes forth. This explains its dependence on season : I am inclined to believe that if we could absolutely remove *one* of the *essential* factors in the production of cholera, (such as a particular degree of sub-soil moisture at a certain low level) that we should be more nearly able to disarm the disease of its power than by any other method. Lower Bengal, the endemic field and home of cholera, is, to a certain degree of necessity, always a swamp. Without its being so, the staple of the country—rice—could not be grown. I am strongly of opinion that all cholera camps should not only be selected on as high levels as possible, but that the sites should be subjected to *thorough sub-soil drainage* ; so as to get rid, to the utmost, of the dangerous element of ground moisture. Pettenkofer’s views on the subject, I am inclined to think, carry us far on the way to an ultimate knowledge of the present mystery regarding the generation of cholera.

Sub-soil drainage, where it can be carried out will, I believe, do more towards the eradication of cholera from its present endemic foci than anything else within man’s power.

Since writing the above, I have come upon the following opinion in the last published Report of the Sanitary Commissioner with the Government of India, in the wisdom of which I entirely concur.

“325. It is worthy of consideration whether it would not be advisable to establish several permanent encamping grounds in the neighbourhood of all large stations occupied by European troops. They should be well-drained, being raised above the surrounding level, if this is necessary to secure the important object, and they should be planted with trees. In many of the recent outbreaks it was found impossible to find proper encamping grounds, and movements which were desirable were rendered on this account impracticable.”

Many instances could be adduced where protection from cholera seems to have been derived from the presence of surrounding trees.

The after history of the cholera epidemic of 1867, (which appeared in the camp at Hurdwar during the Fair) has been worked out with great care by Dr. Cunningham. (*Vide* Report on the Cholera Epidemic of 1867 in Northern India, 1868.)

In this Report it is particularly worthy of remark that we find the record of *many* instances of comparative immunity from cholera amongst those who were in close proximity to cholera patients, and under conditions where the most free communications existed on all sides, both with pilgrims and others.

I have counted no less than *thirty-two* such examples detailed in the Report referred to, all tending *strongly* to disprove the propositions enunciated by the International Conference, that cholera spreads in proportion to the facility and multiplicity of its communications, and that pilgrims infect those around them. I would fain reproduce all these illustrations without abbreviation from the Report in question; but this, from want of space, I find to be quite impossible. I will therefore merely give a memorandum, referring to the examples in question, and to the pages and paragraphs of the Report where they are to be found.

Many instances cited where cholera did not spread; although there was every facility for its doing so.

Examples of immunity from cholera observed amongst those in the proximity of cholera patients, and under conditions of free communications.

Page	39,	para.	82.—H. M.'s 19th Hussars at Meerut.
„	40	„	84.—Dr. Kilkelly's Report of what occurred at Allyghur.
„	45	„	97.—The case of the village of Toorkhra, in the Umballa District; and the villages in the immediate vicinity of Singhawara.
„	48	„	105.—The European Garrison at Dugshaie.
„	50	„	112.—The European adult community of Simla.
„	54	„	120.—The European troops at Jullundur.
„	74	„	171.—The prisoners and troops at Agra.
„	74	„	172.—The boys of the Secundra Orphanage.
„	78	„	180.—The 22nd and 33rd Regiments of Native Infantry, and the 16th Bengal Cavalry, in the Cantonment of Morar.
„	82	„	191.—Banda.
„	84	„	200.—The stations in Oudh generally.
„	85	„	202.—The European troops and prisoners at Benares.
„	86	„	206.—Unusual immunity of the Jails of Lower Bengal.
„	87	„	208.—Dr. Macleod's experience at Jessore.
„	135	„	308.—The pilgrims did not disseminate the disease in the Agra and Allahabad Divisions.

Examples where the disease could by no possible means be traced to infection from pilgrims.

Page	40,	para.	84.—Many places in the Allyghur District.
„	53	„	118.—The case of Gaiinda <i>bheestie</i> , at Jullundur.
„	65	„	149.—The case of the Cabullee at Murree, and of the community generally.

Page 70-1 para. 162.—The Europeans at Peshawur.

- „ 73 „ 168.—The experience of Dr. George Thomson, at Dera Ghazee Khan.
 „ 74 „ 171.—The Districts of the Agra Division.
 „ 75 „ 173.—Bhurt pore.
 „ 76 „ 175.—The Gwalior State.
 „ 80 „ 186.—The Dcolee Irregulars (*Vide* also p. 127.)
 „ 10 „ 187.—Ajmere and Marwar.
 „ 10 „ 188.—The Central Provinces.
 „ 81 „ 189.—Allahabad and Cawnpore.
 „ 82 „ 191.—Dr. Ringer's experience at Banda.
 „ 83 „ 195.—Lucknow.
 „ 85 „ 202.—Dr. Cockburn's experience at Benares.
 „ 86 „ 205.—The Divisions of Allahabad and Benares, Behar, and Lower Bengal.
 „ 87-8 „ 209.—The case of Poorce.

The above quotations furnish as with no less than *thirty-two* remarkable instances of cholera failing to spread where, according to the views of the International Conference, it enjoyed the most perfect facilities for so doing.

There can certainly be no doubt that during the year 1867, when the influence of epidemic cholera was abroad, and when simultaneously with it some three millions of human beings were scattering themselves all over India, from Hurdwar as a *terminus a quo*, that cholera and pilgrims *were* found together in hundreds of places. It could not be otherwise. But that the cholera was altogether dependent for its transit and development on the pilgrim has certainly by no means been proved. On the contrary, so far from this being the case, there are, as shown above, thirty-two distinct and powerful arguments against it, all taken from a Report, the object of which is professedly to search out, with the closest possible scrutiny, the very slightest communication between the passage of pilgrims and the advent of cholera, as cause and effect.

The Report in question is peculiarly unbiassed. The writer is evidently most anxious to see if “a case can be made out” (as the saying is) against the pilgrim, and yet with great candour and calmness of judgment he yields up position after position which had, as it were, been marked out as centres of attack against the pilgrim. What is the result? Simply that the pilgrims are, after all, not always so dangerous as they have been painted, and, again, that quarantine is both inadvisable and impossible, and that any legislative enactment insisting on it must be open to great objections. The Sanitary Commissioner with the Government of India, somewhat retracting his former opinions, wisely sums up regarding quarantine as follows :—

“In my letter to the Government of India, in the Military Department, No. 312, dated the 29th May, 1867, an opinion was expressed that quarantine should be established. Regarding the matter merely in a sanitary light, that opinion remains unaltered; but a careful consideration of the many important points involved leads to the conclusion *that any general attempt to enforce this measure is undesirable.*

312. "The difficulties attending any general enforcement of quarantine are practically very great, and it would certainly be attended with much hardship and oppression to the pilgrims. Quarantine was attempted in nearly every district in the Punjab and the upper part of the North-Western Provinces, and the results are generally spoken of as having been very successful. It is very doubtful, however, how far the two things can be regarded as cause and effect. The Civil Surgeon of Umritsur mentions in his report that "the pilgrims complained bitterly of the treatment they had received near——being driven off the regular road and forced to walk during the heat of the day for miles through heavy sand without food or water. In fact, they attributed a great many of the deaths to this cause." No system of strict quarantine can be carried out without great suffering to those concerned."

313. "Strict quarantine against cholera was one of the measures recommended by the Constantinople International Congress, but there is a strong and growing opinion that such a measure is practically impossible. Mr. Simon's testimony at once to the value of such a measure, if it could be fully carried out, and also as to the impossibility of fulfilling this condition, is given at page 40 of his eighth Report. "Subject to one qualification," he remarks, "which is not an important one for the present argument, it may, I think, be accepted as certain, that quarantine, conducted with extreme rigour and with the precision of a chemical experiment, will keep cholera out of any part of Europe in which the extremely difficult conditions can be absolutely fulfilled, and thus if I speak to the dry question of medical practice, I have no hesitation in saying that England ought to resist cholera by quarantine. On the other hand, though I cannot pretend to discuss with any kind of authority the non-medical aspects of the question, it would be mere pedantry for me to ignore the facts which are of common notoriety, and considerations which are of common sense conflicting with that medical conclusion. A quarantine which is ineffective is a mere irrational derangement of commerce; and a quarantine of the kind which ensures success is more easily imagined than realized."

At paragraph 28 of Dr. Cunningham's Report, the opinion is arrived at that "a filthy state of things, as a general rule, singularly favors the spread of the disease, but is, *per se*, altogether incapable of producing it." There can now be but little doubt on this point; else cholera would long ago have been permanently endemic in all European capitals, and indeed in every country throughout the world. Even those who believe most firmly that the disease originates from a specific germ or agent, and that this is to be found chiefly in human excreta, recognize the fact that filth, *per se*, will not account for the development of the disease. Thus my friend, Dr. H. C. Cutcliffe, in his late *Sanitary Report on certain districts in the Meerut Division*, writes thus:—

"I have already submitted to the Government, North-Western Provinces, separate Reports concerning the cholera epidemic of 1867, and to what I have previously stated I have nothing now to add, unless it be my utter inability to explain why the disease did not

spread amongst the people after the pilgrims had returned to such filthy places as I have described in my notes ; why, indeed, an individual survived in such horrible places as Mangloor, Labreri, Bhynswall, Mokhealee, Jaolee, and others, reeking with human excrement and filth of every description. Often when breathing the horrible atmosphere of these stinking places, and when examining wells close to open cesspits full of black slush, receiving the stinking, muddy fluid from the sewage of adjacent houses and the washings of streets strewn with human ordure, and obviously permitting their contents to percolate through the porous soils down to the water-bearing strata of the wells—often have I asked myself if we can be right in our most recent views of cholera, and of the medium (human fæces) through which this disease is supposed chiefly to disseminate itself.”

The Ruth Festival at Pooree occurs at a season of the year which may with strict accuracy be called “*the cholera season*”—the time when the disease is known to prevail year after year—the exact period at which it is *due* in Orissa. Besides this, we have heat ; moisture of alluvial and sandy soil (undergoing the drying process) ; very considerable range of diurnal temperature ; low levels ; polluted atmosphere ; close stagnant air in dwellings ; extensive cloacal putridity ; vegetable as well as animal decomposition ; contaminated water supply ; absence of privies and latrines ; stagnant ditches ; uncleansed sewers and cesspools ; foetid effluvia ; dense population ; great overcrowding ; human beings poor, debilitated, depressed, fatigued, and miserable : in a word, absolute insalubrity ; nuisances at a maximum—hygiene at a minimum ; man displaying the utmost receptivity for general morbid influences. These circumstances, favored by season, are quite enough to account for the evolution of cholera ; and if I have opposed the recommendations of the Constantinople Conference regarding quarantine, I am entirely at one with them regarding the extreme necessity of all general hygienic measures

which act as obstacles to the development of the disease. I lately addressed these words to the Government : The sanitary importance of enforcing general measures relating to the purity of air, water, and localities can scarcely be exaggerated. This is of infinitely greater moment than quarantine. There can be no doubt that, as more masses of men, pilgrim-crowds should be subject to sanitary, as they are to magisterial and police control, but this, in my opinion, ought to be enforced to a degree far short of the arbitrary detention of many thousands of healthy persons journeying towards their homes on public highways.

Every general condition under which cholera is known to be developed ought, by all possible means, to be counteracted ; herein lies scientific prophylaxis.

The International Conference writes : “ We know nothing precise about them, (*i.e.* specific endemic diseases), but we believe that the mysterious and impalpable production of epidemics is really nothing but the result of the combination of anti-hygienic influences. It is unquestionable that hygienic measures, or the progress of hygiene, always tend to destroy the causes of endemic disease, or to mitigate their sad results.” There is a vast deal of valuable and too-little-appreciated truth in this statement. I should simply like to see it isolated from all ideas of quarantine.

We should, by all means as the Commission says, "exhaust within possible limits the generating sources of Asiatic cholera."

We do not know what these are exactly ; but, in a general way, we know where they lie and how they can be acted on.

We can and certainly ought to endeavour, in the words of the Commission—"incessantly to remove the predisposition of localities to contract cholera,"—in other words, to bring about as much as possible "the diminution of the receptivity of every place."

It is very expedient and necessary to do all this. I merely maintain that the establishment of quarantine is not the best mode of effecting the desired result.

The expense of inland quarantine would be simply ruinous to the State. Dr. Mouat (in his letter of 31st July, 1868, to the Officiating Secretary to the Government of Bengal) calculates that necessary quarantine buildings *for the jails of Bengal* would cost at least *five lakhs of rupees*!! I leave it to skilled arithmeticians to say what sums would be required for the establishment of restrictive measures around the yet uncounted millions of Bengal. I am afraid our Financiers would stand aghast at the result of such computation; and certainly not without reason would they do so.

It must further be borne in mind that lazarettoes themselves are sometimes sources of infection. Thus, (p. 108 of the International Commission's Report) we find that, at the Dardanelles "the disease spread from the lazaretto to the town, causing dreadful havoc there." At p. 110, we read of the case of the Abbabbé Viale, Secretary to the Patriarch of Jerusalem, who was seized with cholera, and died in a few hours "on the very day he left the lazaretto, where he had undergone a quarantine of ten days."

At p. 111, we have more instances cited of infection spreading from lazarettoes. Regarding the one at Rhodes, we have the following very important record: *here only one case occurred on an entire island, and this was originated in quarantine, in the person of a man who had the day before landed from a ship which had no cholera patients on board.*

Surely the Commission cannot maintain that this affords a plea for quarantine; as little does it throw light on the theory that personal circumstances originate cholera; still less does it accord with the *dictum* that the disease is spread in direct proportion to facility of communications.

At p. 112, the Commissioners confess that the assemblage of persons in a lazaretto is *not the less very dangerous to the neighbourhood, in so far that it is adapted to favor the propagation of cholera*"; and again, at p. 128: "*It is not the less true, however, that the proximity of a lazaretto is dangerous to a healthy locality.*"

With regard to the infecting power of animals, the Commission concludes (p. 93): "There is no known fact establishing the importation of cholera by living animals; but *it is reasonable nevertheless, to consider them, in certain cases, as being amongst susceptible objects, so-called.*"

Animals, being "susceptible objects," ought to be quarantined." The deduction from this proposition.

They too then ought to be quarantined. All the horses and cows, and dogs in Calcutta ought to be "under the yoke of lazarettoes and purifying agents."

At p. 97, the Commission decides that *every arrival from a cholera focus, except under peculiar and definite conditions, must be regarded as suspicious*. At this rate, physicians passing from house to house, from one focus of the disease to another, throughout all grades of society, must be very monsters of infection. What duration vile can be devised for such beings? It is to be observed, however, that ships, as the *Virginie*, (*vide* p. 105) having no trace of cholera on board are said to have imported the disease. Therefore we must arrive at the conclusion that doctors, who have not been near cholera patients, may yet transmit the disease in different directions; and that consequently they are sadly dangerous characters under every variety of circumstance!

The description of the process necessary for the thorough disinfection of a ship contaminated by cholera, as laid down by the Commission, at pp. 57-8, is truly complicated and wonderful. There is first washing of every part with a solution of chloride of lime, which is to be effected by pumps. There is then white-washing with lime, and, if necessary, re-painting. Then comes "the *sanitary un-loading*," which it is well to have performed by the crew of the ship, each man wearing a vegetable respirator! Then come measures (such as removal of planking, &c.), which may demand the services of a ship-builder! The completion of the process is thus described—I extract it *verbatim*:

"In place of scraping, disinfection by the *flame of gas* has been lately recommended. By means of an apparatus, a flame of gas is made to act successively on all parts of the interior of the vessel until a slight degree of carbonisation is obtained: it is no doubt a very efficacious mode of disinfection. The painting of the interior of the vessel in oil may also be employed as a useful adjunct to disinfection. It need not be said that every article found in the various recesses of the ship during these operations should, according to circumstances, be either destroyed or disinfected. In the most extreme case where the infection is such, that it becomes a doubtful question whether these measures will be of any use, the question arises of the destruction by fire, or of the submersion of the ship.".....
 "Let us hasten to add, however, that for reasons already set forth, there will rarely be any occasion to have recourse to such stringent measures in connexion with ships contaminated by cholera. Submersion, moreover, is always seriously injurious to the vessel, under whatever conditions it may be effected, by causing a degree of humidity very difficult to be remedied."

With all due deference to the Commission, it is really difficult to repress laughter on perusal of these passages, which have yet, we are bound to believe, been written in all seriousness. That submersion should seriously injure a vessel is scarcely a new fact; although it

may unhesitatingly be allowed that the suggestion above hinted at for destroying a ship by fire, on account of cholera infection, is a distinct originality. The passages above quoted present us with a positive *travestie* of the art of hygiene; and it is much to be regretted that the members of the august Commission at Constantinople should thus have fiddle-faddled with science and common sense—to say nothing of the rights and feelings of the merchant.

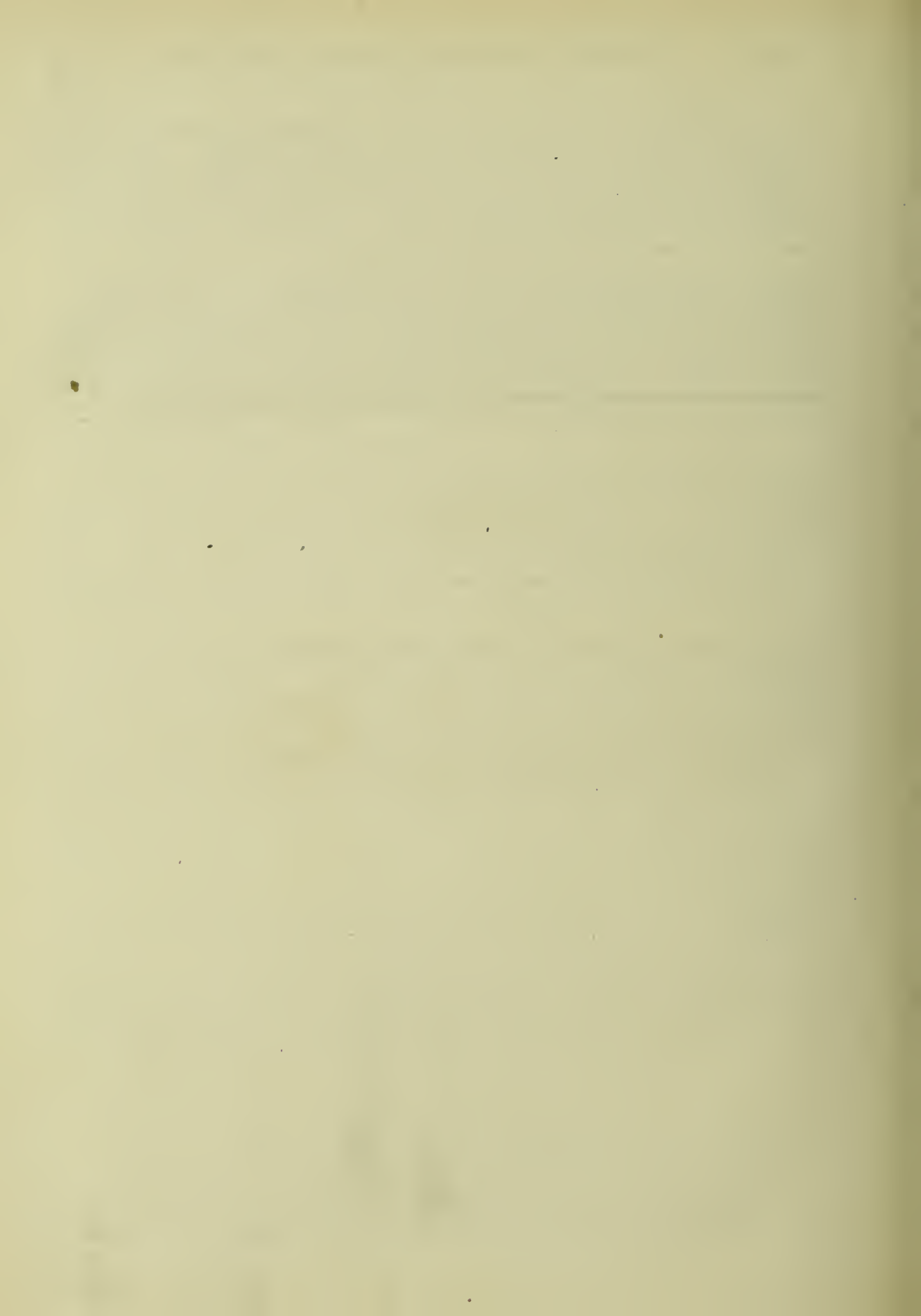
I regret that in these notes I have not space to enter into many of the late very important considerations in relation to cholera; such as the germ-theory, the existence of cholera fungi, the possible connection of these with rice blight, the etiological relation between cholera, and the pollution of water by excrementitious matters, &c., &c. Indeed, I am very conscious that such remarks as I have submitted above are desultory, hasty, and incomplete, and that they do not take in one-half of the vastly important subjects of study which have been considered by the International Conference.

I will shortly lay down, in a separate communication, the general prophylactic measures which ought, in my opinion, to be adopted during all epidemics of cholera; and, what is perhaps yet more important, the preventive arrangements that should be carried out *before* the disease appears. These have been dwelt on to a certain degree in Part I. of this Report. There cannot possibly be anything of graver importance to occupy the thoughts of the physician and the sanitarian.

It has often been said, “we do not even yet know *what cholera is*.” It is, perhaps, for practical purposes, scarcely necessary that we should do so. What do we know of the ultimate nature of life or of death, of gravity, of lunar influence, of electricity, or of chemical affinity? We know that cholera is dependent on general morbid influences, and that these must be combated. Level, site, moisture, temperature, wind, season, electricity, ozone, population, insanitary conditions,—these are the great subjects of study for the sanitarian in connection with cholera; not merely personal proclivity, not the deposit of a germ, nor the existence of a ferment, nor speculations on a *materies morbi*, nor fouling of water (taken by itself), nor the presence of fungi, nor the movements hither and thither of individual men. Conservancy, meteorology, sanitary police, hygiene, medicine, must all be made to diminish the evils resulting from cholera. One so-called ally alone I would fain see off the field, and that is *quarantine*. The laws regulating the diffusion of cholera are, I believe, beyond its influence; and it is undoubtedly a measure capable of giving rise to an infinite degree of personal inconvenience, discomfort, unhappiness, and oppression. The Constantinople Commission “hopes that the British Government will not abandon coercive measures.” I sincerely trust that, in connection with cholera, it will never permit them to come into force in this part of the Indian empire.

In conclusion, as voyagers on the wide ocean differ regarding dimly seen objects, one believing he sees a ship, whilst another, anxiously looking in the same direction, sees nothing, and a third is fully convinced in his own mind that he discerns long-looked-for land; so, on the sea of science, what is on the far horizon is apprehended variously by different minds. In

the one case, however, as in the other, time and favoring circumstances make clear what was before so dubious—to the equal delight of all who differed regarding it. Then it is that the candid disputant confesses his error, still reserving, however, his right to speculate again regarding the next doubtful object! So, if necessary, would it afford me infinite pleasure to confess—had the time arrived when this obscure subject (cholera) was clearly seen and understood—that my poor speculations regarding it were erroneous or even absurd, whilst those of other men had proved in exact accordance with discovered truth. Until that good time arrives, I confess, with regret, that I cannot entirely agree with the learned gentlemen lately assembled, in imposing conclave, at Constantinople, whose views regarding cholera differ materially from those of many anxious searchers after truth in this country. Meanwhile, however, it may safely be said that every movement of the common enemy (cholera) is being closely watched from different directions,—all the observers, although distanced from each other, being true and hearty allies.



PART VI.

CONCLUDING REMARKS.

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Propositions as to meeting the necessary expenditure for the regulation of pilgrimage in Orissa.

I feel confident that, in the different ways which I have indicated in a former part of this Report, a lac of rupees from State Revenue might annually be well spent, and even *economically* spent, on the mitigation of the many and varied evils connected with pilgrimage to Juggernaut.

Some may say, this is not a directly reproductive work. In such an opinion I cannot but entirely disagree. Carried out fairly, it would, I believe, be found to be directly and largely reproductive—in life, in labour, and in money ; in the prosperity and happiness of a people ; in their unspoken gratitude ; and in their attachment to a Government willing and anxious to be to them as an active and useful friend,—not a mere passive and indifferent spectator of their many removable misfortunes.

It is doubtless in the power of the Government to do much, by setting aside a good round sum from national resources, for an object of this kind. At the same time, it is certain the people must be stimulated to assist themselves. The richer men of Bengal and Orissa should be urged to come forward in a cause of this sort. They should combine to oppose the abuses connected with pilgrimage to Juggernaut, which they know to be in direct violation of the injunctions of every creed. They should publicly discountenance all acts which the requirements of honor, charity, and civilisation alike repudiate. They should be invited to form themselves into conventions and associations, the direct object of which should be the promotion of the good of devotees journeying to distant shrines. The leading spirits in Native society should be appealed to, for the physical and moral elevation of their countrymen. There are those amongst us—and I truly believe many such—whose works of charity do honor to their character. There are those in Calcutta and Bombay who always eagerly throw themselves in the van of such benevolent movements,—some of whom have a very passion for the display of well-doing ; whose liberality has relieved indigence a thousand times, even the indigence of the poor of England. It is with such men as these—the influence of whose large-heartedness has passed across oceans, and been felt and appreciated at its worth in Manchester (the fact should never be forgotten)—that much of the work should lie connected with the removal of the misfortunes endured by pilgrims on the high roads of Orissa. By the thought and recollection of the miseries I allude to, I would fain see the Government lending substantial aid in money, and at the same time appealing to the Native gentlemen

of the country to do what lies in their power to bring about much-needed reforms amongst pilgrims. With a Government grant-in-aid, I can only hope that the pilgrims, wandering to Juggernaut from all parts of India, may be more and more relieved from disease, privation, and misery ; that, by combined action on the part of their enlightened countrymen, they may be more and more freed from the shackles of priestcraft and superstition ; and that, even at the risk of opposition and obloquy, brave men may appear from the ranks of Native society, determined, in the words of the simple-minded Reginald Heber, on "sweeping away some of the rubbish of the old pagodas."

Under the influence of a liberal policy, the resources of Orissa will amply recompense the Government. I write this from a deep conviction of its certainty. To bring about such an end, however, time, labor, and money are required ; the more money and labor the less time.

Every page of the past history of Orissa betrays her poverty, yet within her boundaries a new glory will appear if only more money and a larger amount of scientific skill are brought to bear on the removal of those topographical and social hindrances which can, with absolute certainty, be surmounted, but which at present create and perpetuate every possible difference that can exist between often-recurring national calamity and the utmost happiness of a people. Even at the risk of being charged with an unbridled enthusiasm I would presume to urge the Government to spend more money on Orissa. I live in the hope that there are in store for her people days of greater prosperity and happiness than they have yet known, feeling confident as I do that the country contains within herself the elements of a fairer future. Money judiciously expended on it will not only bring joy and blessings to the people, but I feel convinced that it would, at the same time, be reproductive to the Government. The prosperity of Orissa depends upon the extension of education, a free press, railroads, canals, irrigation works, and sanitation. In no other way can she possibly get out of the slough of misfortune in which she has been grievously struggling in the past. By these measures alone, vigorously pushed forward, there will be awakened in her midst the pulsations of a new life, and the foundation of her future civilisation can only thus be laid. Orissa, in the words of the historian Alison, is the direct link between Bengal and Madras,—a link small but of great value, which has not heretofore received the attention it merits. Its very geographical position indicates its vast importance, whilst hard common sense points to it as a land which is unnecessarily lying all but fallow. In writing this I am fully aware that it is (agriculturally) one of the most productive provinces in India. It is nevertheless most backward in civilisation. The true riches of a country can never be said to lie in mere stores of rice. After the prevalence of famine in Ireland, it was observed by a writer in the "Edinburgh Review" (No. 175, p. 233) that they who are habitually and entirely fed on potatoes live upon the extreme verge of human subsistence, and when they are deprived of their accustomed food, there is nothing cheaper to which they can resort ; they have already reached the lowest point on the descending scale, and there is nothing beyond but starvation or beggary. The thought is peculiarly applicable to the abundance of mere rice produce in Orissa. Cobden called the potatoe "that root of poverty ;" and rice, the pride of Orissa, may, in the same sense, be truly said to be the prolific source of famine.

It is a Government policy, large-hearted and more unstinting than Orissa has yet known, that can alone regenerate a province so fateful and yet so full of promise.

Sir Stafford Northcote lately announced in Parliament that the estimated increase of the revenue for the past year reaches no less a figure than that of a million and a half sterling. I hope part of this sum may be devoted to the mitigation of the physical evils which are so apparent to the sanitarian throughout the whole of Orissa—but chiefly at Juggernaut, and on the main roads leading from it.

As far as often-recurring epidemics of cholera, in connection with pilgrimage through Orissa, are concerned, I presume to submit the opinion that the Government cannot possibly be deviating far from the principles of a practical and useful political economy, in furnishing the direct remedy (although it should be at a high money cost) for an evil of such magnitude and gravity ; one calculated to influence, in many social respects and in the most disastrous manner, societies and populations far removed from the actual scenes where sickness and death are liable to occur in their greatest intensity. Like the famine-wave, there is a wave of pestilence, to stay which demands measures of an unusually comprehensive character. I allow it is natural, and perhaps, in a certain sense, right to say : “ Let Orissa look to her own miseries, and let the remedy for them be found in Orissa and amongst the people immediately affected.” This may be (I am prepared to allow) in strict accordance with what is usually set down as sound political economy. But more than half a century has, I fear, taught us,—although the Officials in Orissa have been able men, keenly solicitous for the good of the country and the interests of the fixed and floating population there,—that their decided adherence to so-called “ sound political principles” has *not* been productive of what Orissa stood most in need of—what she at the present moment most requires—outside assistance. The history of the province during late years has taught us the valuable lesson that abstract principles, however good, may require to be deviated from ; and that a people may fall as victims before a calamity, the remedy for which is far beyond themselves, and yet quite within the power of their rulers. It may be, and no doubt will be, argued : “ it is expedient that those should be made to pay who are directly benefited,” and, in the abstract, nothing can be more true or more fair than such a proposition. But, in the very face of such a concession, nothing, I maintain, can be more inexpedient, on public grounds, and indeed from every point of view, than that the Government should be moved to take from those of their subjects who are, beyond all doubt, already embarrassed and in want.

When, during 1866, in Orissa, rice was at prohibitive rates for the poorer classes,—money and grain being both wanting, “ enquiry into distress was not to be made, lest those who so much required it should expect outside assistance.” They were to help themselves ! Results proved how sadly inapplicable such principles were to the circumstances of the people of Orissa ; and as it was with famine, so is it, at all times, with widely-spread epidemic disease. The people, in their indigence and mental depression, reach a point when they are quite unable to act in their own behalf ; they are no longer the masters of the circumstances by which they are surrounded. They should then at once become the direct objects of Government solicitude and aid. The State must not merely be their instructor in wisdom, but their friend in need ; otherwise utter ruin will surely befall them in the future, as it has done in the past.

A grant-in-aid, supplementary to local resources, should be allowed by the Government for the sanitary regulation of the pilgrimage through Orissa. I have already said I do not think that *one lakh of rupees* a year would be too large a sum to allot, for the next three or four years, for this object.

Let this sum be budgeted for and granted; let a Health Officer be appointed at Pooree; and he could, without difficulty, (in consultation with the Magistrate of Pooree, with the Commissioner and Collector of Cuttack, with the Civil Officers throughout Orissa, and with the assistance of the head of the Medical Department,) organize a scheme whereby every farthing of the sum allowed should be judiciously expended, to the incalculable advantage of the people of India, whose delight it is to journey towards Juggernaut.

It may be urged, I am aware, that in such a report as this, I should strictly confine myself to the science of hygiene; and that I cannot be supposed to know anything of standard political economy. It is to be remembered, however, that I am not unfrequently asked by the Government how it appears to me advisable that funds should be raised for certain sanitary objects, such as I am now discussing; and, in the present instance, I have certainly no hesitation in offering a decided, and yet not a hastily formed, judgment.

If mere make-believe and mushroom schemes are to be avoided in the regulation of the pilgrimage through Orissa, the importance of which has been so much insisted on by the International Sanitary Conference, money must be freely expended; and I feel that, under the circumstances, I cannot better finish this Report than by quoting the wise and oracular *dictum* of the Constantinople Commission, in which I heartily concur:—

“The public administration of every country in the world has become convinced, by reason as well as by cruel experience, that the expenditure necessitated by preventive measures is eminently reproductive. This conviction will pass to the masses, and everybody will end by admitting, with us, that no hygienic measure is ever too *costly*, and that the disbursement of even the largest sums in carrying out measures of health is simply equal to laying out money at a very considerable interest. Enormous sums have been spent in bringing the means of destruction to perfection; and can there be any hesitation to spend something for hygiene, which is the art of preservation, the art of sustaining life and warding off disease and death?”

As far as my present argument is concerned, I can only hope that hesitation, on the part of the Government, is out of the question.
